Croonian Lectures
ON
SOME POINTS IN THE PATHOLOGY OF RHEUMATISM, GOUT, AND DIABETES.

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LECTURE II.

WHAT in rheumatism is the starting-point of the morbid process? Is there such a thing as the rheumatic poison? If so, what is it, and what is the nature of the change which takes place as the result of its action? Let me in the first place enumerate the more salient features of the disease as gleaned from clinical experience. An individual after feeling out of sorts for two or three days, perhaps after a chill wakes up in the morning with one of the joints stiff and tender; soon afterwards it swells, and motion causes pain. Other joints now become affected—the knees, wrists, elbows, ankles, and the smaller joints of the hands and feet. There are pain, tenderness, increased heat, swelling, and redness of the skin. The tendency of these to shift from joint to joint is a remarkable feature of the disease. The slightest motion becomes insupportable; even vibration of the room or of the bed causes suffering. There is more or less febrile movement, the temperature ranging from 102° to 104° or higher, and generally more or less sweating, the odour of which is characteristic. The tongue is coated, thirst is generally a marked symptom, and the urine is turbid with lithates and has a strong acid reaction. The more acute and severe the case, the more profuse and acid is the perspiration, and the larger the amount of lactic acid which it contains. This last feature has led to the supposition that in acute rheumatism there is excessive formation of this acid, which, circulating through the system, gives rise to the symptoms which accompany the disorder. It is a theory which has got a very firm hold of the minds of many physicians, and is probably the one most generally adopted. There is so much to be said in its favour that until recently I unhesitatingly accepted it. I hope to show now that, though lactic acid is formed in excess in the disease, and its presence in the blood modifies the symptoms in some degree, it is not the chief agent in producing them. Other factors are at work giving rise to the characteristic feature of rheumatism—viz., the affection of the joints—as well as to some of the other symptoms which I have enumerated, and the excessive formation of this acid must be regarded more as one of the symptoms than as the cause which gives rise to them. The lactic acid theory, however, has furnished me with my true starting-point. In attempting for five or six years to arrive at some satisfactory explanation of the phenomena of this disorder the line of argument which suggested itself to my mind was much as follows:—

1. Lactic acid is the *materies morbi* in rheumatism.

2. According to the views of some authorities the natural source of lactic acid in the system is glucose—which is first transformed into lactic acid and then further oxidised into carbonic acid and water.

$$\underset{\text{glucose}}{C_6H_{12}O_6} = 2\underset{\text{lactic acid}}{C_3H_4\begin{Bmatrix}OH\\COOH\end{Bmatrix}}$$

$$\text{and } \underset{\text{lactic acid.}}{2C_3H_4\begin{Bmatrix}OH\\COOH\end{Bmatrix}} + 6O_2 = 6CO_2 + 6H_2O$$

3. By the so-called "diabetic puncture" the metabolism of glucose in the system can be arrested; sugar appears in the urine, and we have the phenomena of diabetes. Changes, therefore, in the medulla oblongata entirely arrest the metabolism of glucose, and if so, should this be true, would it be possible by modifying these changes in the medulla partially to arrest the transformation of glucose into CO_2 and H_2O at the intermediate stage of lactic acid, and so develop rheumatism? That is to say, have neurotic conditions, have changes in the medulla oblongata, anything whatever to do with the symptoms which are associated with rheumatism?

These were the hypotheses with which I started. But I have tried to show in my previous lecture that lactic acid in the tissues is formed not from glucose, but from the nitrogenous molecules of the tissues—namely, the cyan-alcohols $CH_3.CH\begin{Bmatrix}OH\\CN\end{Bmatrix}$ and $CH_2CH_2\begin{Bmatrix}OH\\CN.\end{Bmatrix}$ My second hypothesis therefore falls to the ground, and with it the third to a very large extent. Certain points, however, presented themselves to me during the consideration of the subject, which seem to connect the disorder with changes in the nervous system, and to furnish a theory as to the causation of rheumatism, by which an explanation may be offered not only of the way in which the symptoms are produced, but also of the action of some of the remedies which have been successfully employed in the treatment of the disease. To these points let me now specially invite your attention.

As a first step in demonstrating the connexion of rheumatism with changes in the nervous system, let me refer to some nerve lesions which are associated with changes in the nutrition of the joints. In respect to this I find that more than fifty years ago the late Dr. J. K. Mitchell[1] advanced a theory of the pathogenesis of rheumatism which connected it with affections of the spinal cord. My own view, which localises the controlling action of the nervous system in the disorder, chiefly in the medulla oblongata, was formed quite independently; it was only, in fact, quite recently that my attention was directed to Dr. Mitchell's views by finding a reference to them on reading a most admirable work, abounding with interesting facts, by his son Dr. Weir Mitchell on "Injuries of Nerves." I here discover, however, some most important links in the chain of evidence supporting my theory, which I will place before you; and after referring to other cases of a similar kind I shall then attempt to point out the way in which the nervous centre is affected both in gout and rheumatism—how, in fact, the rheumatic poison is developed and how it acts.

In a work on "Gunshot Wounds and other Injuries of Nerves," by Drs. Weir Mitchell, Moorhouse, and Keen, of the United States Army,[2] there is the following statement:—

"*Alterations in the nutrition of joints.* Again we call attention to a peculiarity of nerve injuries which we believe to have been overlooked. Like the altered nutrition of the skin, the symptom which we are at present considering occurs at any time after the first few days. It consists essentially in a painful swelling of the joints, which may attack any or all of the articulations of a member. It is distinct from the early swelling due to the inflammation about the wound itself, although it may be masked by it for a time; nor is it merely a part of the general œdema which is a common consequence of wounds. It is more than these—more important, more persistent. Once fully established, it keeps the joints stiff and sore for weeks or months. When the acute stage has departed, the tissues about the articulations become hard, and partial ankylosis results, so that in many cases the only final cause of loss of motion is due to this state of the joints. Of all the agencies which impede movement it is the most difficult to relieve. Were we asked to state in what essential respect these lesions differ from subacute rheumatic disease of the same parts, we should certainly be at some loss to discern a difference. The subject suggests certain interesting reflexions. We have ourselves seen cases of spinal injury in which rheumatic symptoms seemed to have been among the consequences; and four such instances of striking character are to be found recorded in a paper by the late Prof. J. K. Mitchell, *Am. Jour. of the Med. Sci.*, vol. viii., p. 55. Upon the hints which were thus furnished, Dr. Mitchell was induced to consider rheumatism as of spinal origin. His treatment,[3] founded on this view, was most successful, and is still used and recognised in this country. Modern pathologists have traced the causation of rheumatism to a strictly chemical source; but no one can avoid seeing that there may be a cause beyond this, even though the chemical conditions be still considered as essential links in the chain. Thus, after all, the true origin may be spinal, or, at all

[1] The American Journal of Medical Sciences, 1831, vol. viii., p. 55.

[2] Philadelphia, 1864, pp. 83–85.

[3] The treatment he adopted was to apply from eight to sixteen cups, abstracting about as many ounces of blood, to the cervical or lumbar spine, according as the upper or lower extremities were affected, and follow the cupping, if this did not afford relief, by the application of blisters to the spine.

events, the indisputable fact that there are rheumatisms depending for existence on neural changes may aid us hereafter to discriminate varieties of type among the forms of rheumatic disease. It were easy to dwell upon this subject, but enough has been said to show that subacute inflammation of joints may be brought about by nerve lesions, and to direct medical thought anew in a direction which seems favourable to its true and rational progress."

In a subsequent work, the work to which I have already referred—"On Injuries of Nerves,"[4]—Dr. S. Weir Mitchell writes:—

"Of all the various forms of mischief wrought by nerve wounds, the most intractable and disabling are the curious inflammatory states of joints to which we were the first to call attention. ..... In a certain number of nerve wounds, notably most often in those of the upper extremities, one or more of the joints in the wounded limb become swollen. The nature of the injury does not seem to influence the case, as I have seen it follow dislocations, ball wounds, and contusions of nerves, while in an interesting case of Dr. Packard's it was one of the consequences of compression of the sciatic nerve by a tumour. More lately, in the service of my friend, Dr. J. A. Brinton, at the Philadelphia Hospital, I saw a man who had extensive joint lesions, owing to the brachial nerves having suffered during the dislocation, or upon the subsequent reduction of the humerus, so that I suspect these troubles are more common than has been supposed.[5] In one case the joints of the fingers became swollen and tender on the third day after ball wound of the brachial plexus, but usually the swelling appears much later, and, like the glossy skin, is frequently the offspring of secondary neuritis. Often masked at first by the general inflammation of the limb, or concealed by the œdema so common after nerve wounds, it is more persistent than these, and, as they fade, begins to assume importance. We may then have one articulation—and if only one, a large one—involved, or perhaps all the joints of a finger or every joint in the hand or of the entire limb may suffer. The swelling is never very great, the redness usually slight, and the tenderness on touch or motion exquisite. This condition of things remains with little change during weeks or months, and then slowly declines, leaving the joints stiff, enlarged, and somewhat sensitive, especially as to movement. A small proportion of such cases find ready relief, but in many of them the resultant ankylosis proves utterly unconquerable, so that it is vain to break up the adhesions under ether, or to try to restore mobility by manipulation of splints. All alike fail, and serve only to add to the essential tortures of the accompanying neuralgia and hyperæsthetic states of skin. Since writing my last paper[6] I have met with some of the former patients who suffered with these troubles, but in no case originally very severe was there any great gain—indeed in most of them the joints had become every year more stiff and useless. It is, then, quite clear that injuries of the spine, diseases of this organ, and of the brain, and wounds, or any form of lesions of nerves, are capable of developing in the joints inflammatory conditions, usually subacute, and which so precisely resemble rheumatic arthritis in their symptoms and results that no clinical skill can discriminate between the two. In this state it were well to leave the subject. The chemical theories have crumbled, and, in the growing tendency to believe that rheumatism may have more forms than one, it may not be amiss to recall the facts to which we have contributed, and which are well illustrated by the following case. Other and more severe examples will be found in cases appended to the later chapters of this work.

"CASE 30. *Gunshot wound of the right brachial plexus; causalgia; tremor; arthritic lesions; nail-changes; acid sweats; hyperæsthesia; little loss of motion from paralysis; great gain under treatment.*—B. D. L——, aged forty-three, a farmer from Maine. Enlisted July, 1862. He was healthy to the date of his wound, received July 2nd, 1863, at Gettysburg. While kneeling and aiming he was shot in the right side of the neck. He felt pain in the wound, but none down the arm. He spun around, feeling stunned, and fell on his back, not unconscious. In five minutes he arose and walked to the rear, where the wound was dressed with cold water, no splint being employed either then or later. At first all motion was lost. In an hour he could move his finger and abduct the arm, but not flex it. He thinks sensation was perfect, except as to the ulnar distribution. Within an hour he had severe earache, and pain in the shoulder, arm, and forearm. During the second week he began to have burning pain in the hand. At this time, which probably marked the onset of neuritis, the shoulder-joint grew stiff, then the elbow, and lastly all of the fingers. This condition was excessively painful, and remained unchanged. The tremor which is constant in the upper arm muscles began the day of the wound, and had not ceased on his admission to our wards. On admission, October, 1863, it was noted that the ball had entered the right side of the neck, in front, three inches above the clavicle, in the outer edge of the trapezius. The missile passed downward and outward, and struck the anterior edge of the supra-spinal fossa of the scapula, five inches external to the spine of the first dorsal vertebra. Both wounds sloughed, leaving scars 1½ in. in diameter. The patient is well and florid; the shoulder is motionless from stiffness; the lower joints are alike stiff, swollen, red, and painful; the arm, semi-prone and flexed, is carried across the chest, supported by the sound hand. He has slight motion throughout, but the effort causes fibrillar tremor and exquisite pain. The sense of touch is everywhere good, save that there is slight numbness of the back of the hand and forearm. Some causalgia is felt in the palm, but no other pain, except on movement. The palm is thin and red or purplish, and on it the patient uses water now and then as a dressing; there is no atrophy; the wound is healed, but tender, as are also the upper nerve tracks. Muscular hyperæsthesia of the deltoid and triceps is present. The nails are remarkably curved, the hair is scanty, the sweat ill-smelling and acid. The shoulder muscles alone have lost electro-muscular contractility (induction current). Under ether, the joints, when moved, are found to be free from well-marked organic adhesions. Passive motion and electricity caused speedy gain in movement, and in February, 1864, he was able to move all the joints with diminished pain. The muscles were at this time sensitive to induced currents, and the numbness and causalgia had nearly disappeared. He was allowed a furlough, at the expiration of which he deserted. This case is valuable as an example of arthritic changes, extreme in character, with very little sensory or motor paralysis, and seemingly aided by treatment."

Again, Sir William Gull[7] has recorded the following two cases, and his remarks upon them are so suggestive that I quote them in full:—

"CASE 27. *Acute rheumatic (?) affection of the larger joints; paraplegia of lower extremities; slough over sacrum; recovery.*—Annie E——, aged thirty-nine, was admitted into Guy's Hospital, March 31st, 1857, under the care of my colleagues, Dr. Hughes and Dr. Wilks (to whom I am indebted for placing the case at my disposal). Both hands were swollen, stiff, and painful, with an erythematous blush over the back of the right, and on the second joint of the thumb of the left. The legs were so far paralysed that she could only very slowly and feebly move them. The muscles were greatly wasted and flabby, but had not lost their excito-contractility by galvanism.; sphincters weak; no swelling of the knees or ankles at this time; sensation nearly normal, but at times both legs felt numb, and were drawn up involuntarily; urine acid, high coloured, and scanty; tongue covered with a cream-like fur; skin hot; perspiration profuse, with acid smell; pulse 120; systolic murmur over ventricle. On examining the spine, the lower third of the sacrum was found to be bent forward, the result of a fall eleven years before; and near the sacral notch, on the right side, was the cicatrix of a wound which formed at that time. Except this there was nothing abnormal, nor any pain or tenderness on pressure. The history she gave of her case was that, being a widow, she was necessitated to work laboriously at a mangle. She had for two years, when much exerting herself, felt pain in the back between the shoulders, and a sense of constriction and coldness round the chest. Ten days before coming into the hospital, she was seized with pain in the left leg, and had spasmodic contraction of the muscles, with an increase of the pain and constriction round the chest. She had still power to extend the leg, but could not walk. The day following, the hand, knees, and ankles were swollen and painful. With these symptoms there were febrile heat and diarrhœa. The sphincter ani was so weak that the fæces ran from her involuntarily. On the third day a slough formed over the sacrum. No important change

[4] London and Philadelphia, 1872, pp. 168–172.
[5] I have since met with similar cases.
[6] Reports of the Sanitary Commission.
[7] Guy's Hosp. Reports, Third Series, vol. iv., 1858, Cases 27 and 28.

occurred in her symptoms after her admission. There was great muscular emaciation generally; involuntary twitchings of the muscles of the arms and legs; aching, gnawing sensations in both calves; touching the feet gave rise to formication and very lively excito-motor movements. For ten days the hands remained red, painful, stiff, and swollen. She complained much of heat and profuse perspirations, which returned several times in the twenty-four hours. On April 8th the urine was ammoniacal, and contained mucus. The hands were still swollen and erythematous; face flushed; pulse 100, full, as in rheumatism; acid smell of perspiration; respiration 28; movements thoracic and abdominal; abdomen soft; pupils large; nights sleepless. Ordered a grain of opium every six hours, with six ounces of wine daily, and a chop. On April 18th the good effects of the opium and support were very apparent. The patient had passed good nights, and was tranquil in the day. Perspiration lessened. Urine retained in the bladder for thirty-six hours was at length passed voluntarily; it was acid and without mucus. Tongue pale and moist. The slough on the back had deepened. The pupils still continued large. Occasional contraction of the muscles of the legs. No permanent rigidity. Hands remained swollen and stiff, but less red. She was unable to move the shoulders freely. On April 22nd the hands had recovered their normal appearance, and had lost their stiffness; the legs could be moved more freely; the sense of constriction round the chest was gone; pulse 96; skin cool and dry; appetite good; urine normal, but she could not empty the bladder oftener than once in twenty-four hours. From this date she slowly recovered. The opium was continued throughout her convalescence. At the beginning of June the muscles of the lower extremities were galvanised regularly. By the end of the month she was able to stand without help. Her improvement was uninterrupted, and in September she left the hospital quite well.

"*Remarks.*—It is a matter of great clinical interest that lesions of the cord are occasionally attended with an affection of the joints not to be readily distinguished from that which occurs in acute rheumatism. When this happens there may be difficulty in determining the pathology of a case. It may, indeed, be impossible to say whether the symptoms at a certain stage are due to disease of the cord or to a rheumatic state of the blood. In such instances we have a proof of the near relation of humoralism and solidism; for one observer may maintain that the local lesions have a common origin in the altered state of the blood, whilst another may with equal confidence assert their dependence upon a primary disturbance of the nervous centres. The case here recorded is an example of these difficulties. Fatigue from mechanical labour, acting especially on the lumbar and dorsal portions of the spine, in a delicate and anxious subject, appears to have injured the nutriment of the cord; for two years, when much exerting herself, the patient felt pain between the shoulders and a sense of constriction and coldness round the chest. Paraplegia then suddenly came on, followed by redness, pain, and swelling of the larger joints, as in rheumatism; together with these symptoms, there were others indicating a rheumatic condition—white furred tongue, flushed face, hot skin, profuse perspirations having an acid smell, systolic murmur over left ventricle, &c. Was there here a rheumatic state of the blood induced by the spinal lesion, or was the nervous derangement the result of a rheumatic state? Notwithstanding the labours of morbid anatomists and chemical pathologists, we are not at present in possession of any certain knowledge of what constitutes the rheumatic condition. My colleague, Dr. Addison, from his clinical experience, has long drawn attention to the close connexion between spinal lesions and true rheumatism, but has never developed the idea beyond expressing a suspicion of their relation. At the time this case was under care the treatment was a subject of much observation. The result was very satisfactory. Whatever might have been the state of the cord, it was clearly induced by fatigue, and was soon followed by sloughing of the integuments. It would not, therefore, admit of depletory measures, but, on the contrary, required a nutritious diet and wine. Opium was prescribed apparently with great advantage; it allayed nervous irritability, and gave the patient sleep.

"The following case is also illustrative of the relation between spinal injury and rheumatic symptoms. The same plan of treatment as above was equally successful. The therapeutical view of this subject is certainly not without the greatest interest. No doubt the texture of the cord has but feeble reparative powers, notwithstanding it has been shown by experimenters on animals that occasionally, after a transverse section, the parts unite and the functions are re-established.

"CASE 28. *Concussion of the spine; partial paraplegia: redness and swelling of the wrists and ankles as in acute rheumatism. Recovery.*—N. T——, aged thirty-eight, on Jan. 22nd, 1855, inadvertently stepped backwards into a hole a few feet deep and received a concussion of the spine. After a few days he became partially paraplegic, with weak sphincters, and at the same time there came on a diffused redness and swelling of the ankles and wrists. The swelling was not from effusion into the joints, but from œdema of the surrounding tissues. The joints were very painful. The redness and swelling were variable in degree. When most marked they presented the usual appearances of rheumatism, or rather of gout, for the erythema was brighter and the œdema more distinct than in rheumatism. The hands were equally affected with the ankles, though there was no obvious want of muscular power, nor any affection of sensation in the upper extremities. Tongue clear; pulse 120; no acid perspirations; urine high coloured, free from deposits, and of normal quantity. The nerves of the surface generally were hyperæsthetic to a slight touch, but deep pressure gave less inconvenience. The treatment consisted of good nourishment, wine and brandy freely administered, and opium to allay pain and overcome sleeplessness. The pulse gradually acquired more power, and sank to 80. The affection of the joints continued in varying degree through March, April, May, and June. From the beginning of April there was an improvement in the power over the legs. The same treatment was continued throughout without the use of mercurials, local depletion, or counter-irritation. In June the patient was able to walk without assistance. During sleep the hands and feet, wrists and ankles, often became erythematous and swollen. There was occasional formication in the lower extremities. Sleeplessness, from the beginning of the case and throughout, was a troublesome symptom. In July the patient was able to leave the hospital, and to resume to some extent his duties as medical practitioner. He was under the care of my colleague, Mr. Cock."

Again, according to Professor Charcot,[8] "nutritive disorders consecutive on lesions of the nervous centres not infrequently take up their seat in the articulations." He establishes two varieties. The first comprising such cases as those I have already referred to, and including here also the *arthropathy of hemiplegic patients*, first described in 1846 by Scott Alison,[9] afterwards by Brown-Séquard.[10] These "arthropathies are limited to the paralysed limbs, and mostly occupy the upper extremities. They supervene especially after circumscribed cerebral ramollissement, and more rarely as a consequence of intra-encephalic hæmorrhage. They usually form fifteen days or a month after the attack of apoplexy—that is to say, at the moment when the *tardy contracture* that lays hold on the paralysed members appears; but they may also show themselves at a later epoch. The tumefaction, redness, and pain of the joints are sometimes marked enough to recall the corresponding phenomena of acute articular rheumatism. The tendinous sheaths are, indeed, often affected at the same time as the articulations. It is needless to insist upon the interest which pertains to these arthropathies as regards diagnosis, articular rheumatism, whether acute or subacute, being an affection often connected with certain forms of cerebral softening, and one which, indeed, shows itself also occasionally after traumatic causes capable of determining shock in the nervous centres. On the other hand, many affections of the spinal cord are erroneously attributed to a rheumatic diathesis in consequence of the co-existence of these articular symptoms. The clinical characters which render it easy to recognise arthropathies correlated with lesions of the nervous centres, and which allow them to be distinguished from cases of rheumatic arthritis, are chiefly these:—1st. Their limitation to the joints of the paralysed members. 2nd. The generally determinate epoch in which, in cases of sudden hemiplegia, they make their appearance on the morbid scene. 3rd. The coexistence of other trophic troubles of the same order, such as eschars

[8] Lectures on Diseases of the Nervous System. Translated by Dr. Sigerson. New Sydenham Soc., 1877, p. 92.
[9] "Arthritis occurring in the course of Paralysis." THE LANCET, vol. i., p. 278, 1846.
[10] Ibid., July 13th, 1861.

of rapid formation, and (when the spinal cord is involved) acute muscular atrophy of the paralysed members, cystitis, nephritis, &c. The type of the second group is to be found in progressive locomotor ataxia. ..... Ataxia arthropathy usually occupies the knees, shoulders, and elbows; it may also take up its seat in the hip-joint." Professor Charcot then goes on to describe the physical and clinical characters of this form of arthropathy, and after pointing out the absence of all traumatic or diathetic cause of rheumatism or of gout, he proceeds as follows:—"It is not very rare to find the spinal grey matter affected in locomotor ataxia; but the lesion is then generally found in the posterior cornua. Now, it was quite different in two cases of locomotor ataxia complicated with arthropathy, in which a careful examination of the cord has been made; the anterior cornua were in both cases remarkably wasted and deformed, and a certain number of the great nerve cells, those of the external group especially, had decreased in size, or even disappeared altogether, without leaving any vestiges. The alteration, besides, showed itself exclusively in the anterior cornua corresponding to the side on which the articular lesion was situated. It affected the cervical region in the first case, where the arthropathy occupied the shoulder; it was observed a little above the lumbar region in the second case, which presented an example of arthropathy of the knee. Above and below these points, the grey matter of the anterior cornua appeared to be exempt from alteration. From what precedes, I hope to have made it appear at least highly probable that the inflammatory process, first developed in the posterior columns, by gradually extending to certain regions of the anterior cornua of the grey matter, was able to occasion the development of the articular affection in our two patients. If the results obtained in these two cases are confirmed by new observations, we shall be naturally led to admit that arthritic affections connected with myelitis, and those observed to follow on cerebral softening, are likewise due to the invasion of the same regions of the grey matter of the spinal cord. In cases of brain-softening, the descending sclerosis of one of the lateral columns of the spinal cord might be considered as the starting-point of the diffusion of inflammatory work."

From these illustrations gathered from various authorities, it is, I think, very clearly shown that lesions in the spinal cord or along the course of the motor nerves may give rise to changes in the joints, which in many cases present no difference from the condition seen in subacute rheumatism, in others, as in Charcot's disease, producing rapid disintegration of the bony tissue—decay without repair, as it has been so aptly termed by Morrant Baker. But in all the cases we have changes taking place in the condition of the joints, and these changes produced by causes acting on the nerves connected with the part, either along the course of these nerves or at their origin in the central nervous system.

Now, is there in the phenomena of rheumatism anything suggestive of an irritating cause acting upon portions of the central nervous system? If so, what is it, and how is it produced? Let me call your attention to the changes produced in the system when under the normal state of things the surface of the body is exposed to the action of cold or heat. The effect, as is well known, is very different as regards cold-blooded and warm-blooded animals. External cold diminishes and heat increases the metabolic activity of the cold-blooded animal, acting like a mixture of dead substances in a chemical retort. But in a warm-blooded animal, within certain limits, cold increases and heat diminishes the bodily metabolism, as shown by the increased or diminished consumption of oxygen and production of carbonic acid as the temperature falls or rises. There is obviously a mechanism of some kind counteracting and, indeed, overcoming those more direct effects which alone obtain in cold-blooded animals. But under the influence of urari, which paralyses the end organs of the muscular nerves, a warm-blooded animal behaves, as regards its bodily metabolism, under the influence of external cold and heat like a cold-blooded animal. A similar result is obtained by division of the medulla oblongata. The temperature of an animal so operated upon falls, and then exposure to heat augments and exposure to cold diminishes its metabolic activity. "We can best explain these results by supposing that under normal conditions the muscles which, as we have seen, contribute so largely to the total heat of the body, are placed, by means of their motor nerves and the central nervous system, in some special connexion with the skin, so that a lowering of the temperature of the skin leads to an increase, while a heightening of the temperature leads to a decrease, of the muscular metabolism. Further, though the matter has not been fully worked out, the centre of this thermo-taxic reflex mechanism appears to be placed above the medulla oblongata, possibly in the region of the pons Varolii. When urari is given the reflex chain is broken at its muscular end; when the spinal cord is divided the break is nearer the centre."[11]

How does this bear upon rheumatism? An individual is exposed to a cold draught or gets wet; the surface is chilled; the cutaneous vascular areas are constricted; by reflex action through the vaso-motor system the splanchnic vascular areas and the vessels of the muscular areas are dilated; the vaso-motor nerves distributed to these parts are paralysed, so to speak; with this paralysis of the vaso-motor nerves there is dilatation of the vessels in connexion with them, and so a larger amount of blood is carried to the part, and consequently a larger quantity of oxygen to act upon the tissues. But an increased supply of blood is not sufficient of itself to increase the functional activity of an organ, and therefore to produce increased heat. This has been clearly demonstrated by the well-known experiments on the submaxillary gland and by the experiments on the muscles. The submaxillary gland is supplied by two nerves, the branches of the chorda tympani reaching it along its duct, and by branches of the cervical sympathetic reaching it along its arteries. Now the chorda contains two sets of fibres—(1) secreting fibres acting only on the epithelium cells, and (2) vaso-motor or dilating fibres. Stimulation of this nerve brings about two events—dilatation of the bloodvessels of the gland and a flow of saliva; that is, there is not only a dilatation of the vessels, and so increased supply of blood, but there is an absorption, an assimilation, of some of the molecular constituents of the blood by the gland cells, and if these constituents are properly elaborated by the cells, the formation of saliva. But the elaboration of these constituents can be modified, for by stimulating the sympathetic nerve "a slight increase of flow is seen, but this soon passes off, and so much saliva as is secreted is remarkably viscid, of higher specific gravity, and richer in corpuscles and protoplasmic lumps, and is said to be more active on starch than chorda saliva."[12] This fact has a very important bearing upon the subject I am discussing—namely, the fact that according to the variations in the stimulus applied to the two sets of nerves, alterations in the secretion can be produced; modification, that is to say, in the molecular changes in the contents of the secreting cell can in this way be brought about.

Further, if a small quantity of atropine be injected into the veins, stimulation of the chorda produces no secretion of saliva at all, though the dilatation of the bloodvessels takes place as usual. This proves "that atropine, while it has no effect on the vaso-motor fibres, paralyses the secreting fibres just as it paralyses the inhibitory fibres of the vagus. Hence, when the chorda is stimulated, there pass down the nerve, in addition to impulses affecting the blood-supply, impulses affecting directly the protoplasm of the secreting cells and calling it into action, just as similar impulses call into action the contractility of the protoplasm of a muscular fibre. Indeed, the two things, secreting activity and contracting activity, are quite parallel. We know that when a muscle contracts its bloodvessels dilate; and just as by atropine the secreting action of the gland may be isolated from the vascular dilatation, so by urari muscular contraction may be removed and leave dilatation of the bloodvessels as the only effect of stimulating the muscular nerve."[13]

If this is the case, there must be, in order that heat may be developed, not only an increased supply of blood to a tissue, but also some chemical change in its molecular constituents. Such a molecular transformation is shown by the production of lactic acid and carbonic acid when a muscle contracts or when it dies. The molecules forming these substances are detached from the muscular tissue. Now I would suggest that the change in the molecular constituents of the muscular tissue which leads to the further development of heat results from a weakening or lessening of the power, whatever that may be, which holds the molecules together; that with the dilatation of the vessels in the part, under the influence of the vaso-motor nerves, there is also a splitting up or tumbling to pieces of the

[11] Foster's Physiology, fourth edition, p. 467.
[12] Ibid., p. 261. [13] Ibid., p. 261.

albuminoid molecules, and from both causes heat is developed. The normal change of the cyanalcohols is interfered with. Their condensation into higher cyan-alcohols with elimination of urea, or their change into cyanamides and amido-acids with the ultimate oxidation of the latter, is modified. The molecules $CH_2\begin{cases}OH\\CN\end{cases}$ and $C_2H_4\begin{cases}OH\\CN\end{cases}$[14] become detached more or less from each other, and by hydration (by which heat is developed) form substances—glycollic acid and lactic acid—which are readily oxidised, more readily than the amido-acid glycocine which is also formed. The oxygen, though conveyed in larger quantities than normal by the increased blood-supply to the tissue, is completely used up in oxidising into carbonic acid and water the glycollic and lactic acids[14] which have been formed; the excess of lactic acid and the glycocine are unoxidised, and pass into the circulation. Now, in a normal or healthy state of things, the irritating or stimulating cause acting on the vessels and nerves of the skin being removed, reaction would be set up there, the cutaneous vascular area acted upon by the lactic acid would dilate, and consequently the vessels of the muscular area would contract, and this latter contraction would be increased by the stimulating effect of the glycocine or some resulting morbid product, which, being a morbid product, would stimulate some portion of the nervous system. We should naturally expect that under the normal state of things it would so act upon the nervous system as to check the further formation of the morbid material. This could be done by stimulating the vaso-motor nerves connected with the vessels of the muscular area and causing their contraction. We have such an example of stimulation, though in a different direction, in the effect of carbonic acid on the respiratory centre. A closer illustration may perhaps be found in what results from the injection of bile (which contains glycocine) into the blood. This is at once followed by increased arterial tension. But the closest analogy may be found in the effects produced on the system by what is simply a form of vegetable uric acid—viz., caffeine. In moderate doses, this increases the heart's action, both by its direct effect on the organ and also by exciting contraction of the arteries; the blood-pressure and the frequency of the pulse are both intensified. The morbid product, then, which, as I shall endeavour to show, is uric acid, by increasing the arterial contraction, would, in a healthy state of things, cause less blood to go the muscular area, the molecular constituents would again be held more firmly together and undergo the normal changes, the uric acid being meanwhile excreted by the kidneys and the lactic acid by the skin. I have here drawn you a picture of an ordinary feverish cold—the primary chill, the ensuing febrile condition, the elimination of lithates, with the subsidence of the attack.

The morbid product I have said is uric acid and results from the excessive formation of glycocine in the muscular tissue. This brings me to the questions—What relationship has glycocine to uric acid, and how are these concerned in the phenomena of rheumatism? We know that in gout an abnormal amount of uric acid is present in the blood. The researches of Dr. Garrod have shown this very clearly. But how the uric acid is formed, why in some cases it leads to uric acid calculi, why in others it passes off in the urine as gravel, in others as urate of ammonia, and in all these cases, it may be, without the joints being disturbed; why, again, in other cases associated with uric acid in the blood, the joints become affected and present the symptoms known as gouty, are points still open for discussion, and I will, therefore, as I think they are closely related to and have a distinct bearing upon the phenomena of rheumatism, turn aside and detain you for a short time whilst I try to throw some light upon them.

(To be concluded.)

[14] See *ante*, page 628.

MEDICAL HEROISM IN RUSSIA.—The two Russian doctors who, as mentioned in a recent issue, heroically attended to a very violent hydrophobic patient, are now in the Kharkoff provincial hospital under the care of Professor Kovalevski. They are about to be sent to Pasteur in Paris, a considerable sum having been already received in subscriptions for the purpose of defraying the expense.

Gulstonian Lectures
ON
SPASM IN CHRONIC NERVE DISEASE.

Delivered at the Royal College of Physicians of London, March, 1886.

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LECTURE II.

(Concluded from page 636.)

THE case I shall relate next is a good instance of the results of pressure on the cord applied from within by central tumours. The disease is a very rare one, and the specimen I show is so beautiful an example of it that I have endeavoured to work out the histological changes which it has produced in the cord as minutely as possible, in order to see how far they explain the clinical phenomena observed during life.

C. W——, aged fifty, waiter, was admitted into St. Thomas's Hospital, under the care of Dr. Stone, on Jan. 24th, 1885, and died on March 18th, 1885. His family history was unimportant; he had a wife and five children, all strong and well. He had enjoyed the best of health since he was a child, and had never had syphilis. His illness commenced somewhat suddenly, with pain in the back, eighteen months before his admission. Partial loss of power and sensation in both his arms and hands soon followed, together with tremulousness on attempting to use them. It was not until three months before coming to the hospital that his legs became affected. Since then he had had numbness and pricking sensations, loss of power, and a sensation of coldness in them. On walking, the ground felt soft. His bowels had been irregular, and he had had some difficulty in passing urine; his appetite had been poor; he slept fairly well. On admission, he was a healthy-looking man, and complained of loss of power, numbness, and formication in his legs, together with incontinence of urine. On examination, no angular curvature or marked rigidity of the spine was discovered; but some tenderness without prominence was found about the lower cervical and upper dorsal vertebræ. The legs were almost completely paralysed and anæsthetic, but there was no wasting of muscles, no rigidity, and no tremors. The tendon reflexes were much exaggerated and there was ankle-clonus in both legs. The patient could use his hand and arms fairly well, but they were numb and tremulous and the grasp was weak. There was no ocular paralysis. Urine was retained and the bowels confined. Pulse 84; temperature normal. Tongue slightly furred. The urine was of specific gravity 1030; no albumen; faintly acid. The abdomen was natural; hepatic and splenic dulness was normal. The lungs were resonant and the breathing healthy, nor was there anything abnormal detected on examination of the heart. He continued in much the same condition for some weeks, complaining a good deal of pain in the back high up and of occasional pains in the legs. The muscular power and sensation underwent but slight variations in the upper and lower extremities, though he complained sometimes of twitchings. The temperature was generally normal, but now and then somewhat raised. Incontinence of urine set in about Feb. 5th, and it became alkaline and phosphatic, and contained albumen. On Feb. 24th it was noticed that there was tenderness in the lower dorsal and lumbar regions of the spine, and that complete anæsthesia existed below the level of the middle of the chest. On March 12th the legs were completely powerless and the right leg œdematous. The patellar and plantar reflexes were very brisk; ankle-clonus was marked, but there was no knee-clonus. Sensation of touch and of pain in lower extremities was abolished; sensation of heat was retained. There was no control over the bladder or rectum. In the centre of the sacral region was a large horseshoe-shaped bedsore, with a red granulating surface, and a smaller one was forming over the right hip. The urine was alkaline, and contained pus and mucus. On March 14th the patient took his tea at 5 P.M., and seemed to be in his usual condition. Soon after 6 P.M., when the sister

came to him, he was found to be unconscious. At 6 P.M. his eyes were shut and he was breathing heavily, and when asked how he was, he said he was "as usual." The pupils acted to light. His tongue was protruded to the left, his left cheek was flaccid, and his left arm powerless. His head and eyes were turned to the right. The pulse and heart-sounds were very feeble, but there was no murmur. He altered but little after this, and died on March 18th.

The following is an account of the post-mortem examination, made twelve hours after death:—Body emaciated. Over the sacral region in the middle line a large superficial bedsore was seen, and there were several smaller ones in the neighbourhood. The peritoneum, pericardium, and right pleura were healthy; the left pleura was everywhere firmly adherent to the thoracic wall. The lungs were intensely congested and œdematous, but otherwise healthy. The heart appeared normal in size. The valves on the right side were natural; those on the left a little thickened, but competent. Along the line of attachment of the mitral valve to the wall of the heart on its auricular aspect was a series of papilliform elevations, such as are often found in this position in cases of endocarditis. There appeared to be little or no coagulum upon their surface. The spleen was large, weighing 9½ oz., and contained several large pyramidal infarcts, which were still soft, and had a very clearly defined white margin. The bladder, ureters, and the pelves of the kidneys were inflamed, and presented some phosphatic deposits upon their surface. The kidneys were somewhat large, succulent, and showed evidence of early suppurative nephritis. The capsule peeled off easily, and below it were seen, in large numbers, minute white dots, which felt gritty when touched with the point of the knife. In one kidney was a small infarct, opaque, yellowish white in colour, with a red margin. The weight of the kidneys was 10½ oz. The liver was somewhat large, and very heavy, weighing 70½ oz. The pyloric end of the stomach was attached by slight adhesions to the gall-bladder. The latter was completely filled by a large gall-stone. Its walls appeared to be fairly healthy, except at the extreme fundus. The latter was thickened by new growth, and projected as a hard nodule in the small indentation through which the healthy gall-bladder often projects on the upper surface of the liver. From the nodulated fundus, as a centre, grew a large mass of carcinoma into the substance of the right lobe of the liver. The line which limited its growth furthest away from the gall-bladder was curved, and in its neighbourhood the luxuriant new growth bulged upon the surface of the organ. That portion which was nearest to the gall-bladder was depressed and harder, giving one the impression that it was older than the peripheral growth. Large vessels coursed over the surface of the mass. One or two very minute islands of new growth were seen here and there in the liver-substance at a distance. The stomach and intestines were healthy, and no focus of new growth was found which could have given rise to that in the liver as a secondary product. The spinal column, as seen from the interior of the body, seemed to be perfectly natural; nor, on removing the posterior portion of it and taking away the spinal cord, did it present any traces of disease. On removing the brain, the greater bulk of the right hemisphere, as compared with the left, was very striking; to the finger it felt soft, especially in the lower part of the parietal region and in the temporo-sphenoidal lobe. On making a horizontal section, so as to expose all the central ganglia to view, it was seen that the whole of the corpus striatum—both the nucleus caudatus and nucleus lenticularis—was softened, and broke up under a stream of water. The internal and external capsules, the convolutions of the island of Reil, and other convolutions adjacent to them, were in a similar condition. The right middle cerebral artery was found to be completely blocked, just beyond the spot where the first few vessels are given off to the central ganglia. On examination of the spinal cord, it was found that the dura mater was healthy. At the junction of the lower dorsal and upper lumbar regions was a softened area about an inch in length, and involving apparently the whole thickness of the cord. It was rather deep red in colour, with a pale yellowish island at one spot, which, with its deeper coloured periphery, was very suggestive of infarction as it is seen in other organs. Higher up, about the middle of the dorsal region, the anterior spinal artery was interrupted in its course, and surrounded by a long superficial hæmorrhage of a brownish-red colour. The cervical enlargement, especially in its upper part, seemed to be of enormous dimensions, retaining, nevertheless, the natural shape of the cord. On pressing with the finger, it was found to be very firm over an area one to two inches in length. On making a transverse section through the cord in the upper cervical region, where there was no feeling of increased density, the central canal was found to be much enlarged and to contain blood partially coagulated. Where the canal opened out into the fourth ventricle it appeared to be healthy. When a section was made through the enlarged and hardened portion of the cord a most curious appearance presented itself. A very narrow and even rim of apparently healthy white matter surrounded, as with a sheath, a dense reddish-grey mass, of oval outline. In the centre of this mass was a hollow space, which presented a very marked resemblance in shape to the central grey matter of the spinal cord, and which contained blood. On teasing out a portion of this new growth in the fresh state, it was found to consist mainly of spindle-cells and of cells with many long fine processes, such as one sees in gliomata.

In the first of these two cases of spinal tumour, where the pressure was exerted upon the cord from without, death occurred in twelve months from the appearance of the first symptoms. The latter were, in order of time, weakness of the legs in walking, increasing weakness of legs, accompanied by cramp and shooting pains, paraplegia, cramp, and involuntary flexing of legs; slight numbness and long continued attacks of muscular spasm in the lower extremities; and, finally, persistent rigidity. In the second case, the symptoms due to pressure alone, which was exerted upon the cord from within in the cervical region, continued for fifteen months uncomplicated by other disease; they were simply partial loss of power and sensation in the arms and hands, and some tremor in them when used. This was the condition of the arms when the patient was admitted into the hospital, and it was little altered even at the time of his death, which occurred twenty months after the appearance of the first symptoms. During the last five months of life, fresh symptoms arose in relation with hæmorrhage and softening in the dorsal region of the cord—accidents which are very liable to occur in cases of gliomata; and the accident which finally proved fatal was embolism of the right middle cerebral artery, giving rise to left hemiplegia.

FIG. 24.

Transverse section (natural size) of spinal cord in a case of central glioma. *a*, Rim representing spinal cord; *b*, anterior cornu; *c*, posterior cornu; *d*, central tumour.

When a tumour grows in the spinal canal outside the cord, it may produce but few symptoms until it presses the cord against the resisting walls of the canal; but after this has taken place the course of the disease is naturally very rapid, as the cord is quickly flattened by the constantly increasing demands for growing space which are made by the tumour. When a tumour arises, on the other hand, within the spinal cord, it disturbs its functions even from the very commencement; but as the nerve substance appears to be elastic, and to allow a good deal of gradual stretching without serious interference with its functions, a tumour may go on growing for a long time before it produces striking pathological phenomena, either by pushing the cord against the bony walls of the spinal canal, or by exhausting the elasticity of the membranes which envelop it. These remarks apply only to gliomata and such non-malignant tumours as exert pressure on surrounding tissues, but do not invade them. The description which I now give of the microscopic appearances of the spinal cord and of the tumour in the present case shows that a state of things is produced by the disease which fully explains the chronicity of some of these cases, and the trivial symptoms which present themselves. The tumour is situated almost entirely in the cervical region, and mainly in the cervical enlargement. In the middle of the latter the mass assumes its largest proportions, and the enveloping sheath of nerve-tissue is comparatively smaller than in any other region of the cord (Fig. 24). When examined with the

microscope, the greater part both of the white and of the grey matter can be readily recognised, though pressure has produced some alterations in them. On holding up a stained transverse section to the light, one observes in its anterior third a small oval area which is more transparent than the parts around; it is situated in the white rim, and lies upon the tumour. Under a low power this proves to be the anterior cornu, containing the usual multipolar cells (Fig. 26). Symmetrically placed upon the opposite side of the tumour is a similar oval mass, which is the other anterior cornu. The cells are not healthy on either side, but are pigmented, and more or less elongated by pressure (Fig. 28); but considering the pathological conditions to which they have been subjected, they are singularly well preserved. The anterior roots can be traced from the cornua through the white substance to the periphery of the cord, and the posterior cornua extend backwards along the margin of the tumour. The lateral, posterior, and anterior columns of white fibres are all present, and show but slight pathological alterations (Fig. 27); there is no marked sclerosis anywhere. The same may be said of the whole extent of the cord which is occupied by the main bulk of the tumour. The latter becomes smaller and smaller in the lower cervical region, and is no longer evident as a mass in the lower dorsal region. Here, however, considerable hæmorrhage and softening have occurred (Fig. 25); and to these changes the later symptoms in the case may be referred, when the legs became paralysed and increase of the tendon reflexes and ankle-clonus appeared. As the tumour becomes smaller, and finally ceases to be recognised as such in the dorsal region, it is probable that the changes present in the cord there represent the early stages of its growth. They occupy the left half of the posterior columns and the left lateral column, and consist of a peculiar thickening of the neuroglia, which is transformed into a hyaline substance (Fig. 37). The nerve fibres in its meshes are at first but little altered, then they become swollen; the vessels are much thickened, and their walls assume the same glassy appearance as the neuroglia. In the cervical region the central canal cannot be recognised, but in the lower parts of the cord, where the growth is early, it can be seen pushed to the right. As to the tumour itself, it consists of numbers of islands of new growth situated around large bloodvessels as centres, and starting from them. The vessels have the thickened hyaline walls already referred to, and numbers of fibrillæ can be seen issuing from them. The new growth is richly nucleated, and has a very definite radiate arrangement round each centre. On examining very fine sections under high powers, the new tissue is seen to consist of meshworks of very delicate fibrils and bundles of fibrils in which are situated the nuclei. It may therefore be put down as glioma. (Figs. 29 and 30.) In Virchow's *Archiv* for 1884 a very similar case is recorded by Dr. Reisinger, and an abstract of all the cases to be found in medical literature is added. They amount to twenty in all. It is very curious that in Dr. Reisinger's case the earliest changes were seen, as in mine, in the posterior columns near the central canal. The minute anatomy of the specimen I show here explains why the symptoms in cases of central tumour of the cord may be so slight and extend over such long periods of time, and why spastic conditions are not readily induced, as they are when pressure is applied from without. For even when the disease is so extreme that the substance of the cord forms merely a narrow ring round it, the nerve tissue presents very slight pathological changes.

I shall now relate a case which illustrates the modification which occurs in the symptoms of disease of the lateral columns, when it is combined with disease of other parts of the cord.

Case of Primary Disease of the Lateral Columns, accompanied by similar changes in other parts of the Central Nervous System.—M. H——, aged fifty-three, whose occupation was pulling down old houses, was admitted into St. Thomas's Hospital, under the care of Dr. Ord, on Nov. 10th, 1884, and died on Dec. 2nd of the same year. There was no history of nerve disease in his family. He had always enjoyed fair health, though troubled with indigestion and bilious attacks. The only definite illness he had had was ague at the age of twenty-three. He had never had syphilis. Before his present illness began he had been in the habit of drinking five or six pints of beer daily, but no spirits; he also smoked a good deal—about half an ounce of tobacco a day. His occupation necessitated pretty constant exposure to cold and wet, and he had had several falls, but had never had any symptoms of importance after them. About seven years before admission to St. Thomas's he had had great anxiety about money matters, and was up night and day for about a month. He then got out of sorts, and presently noticed that the toes of both feet were becoming numb, and the legs somewhat stiff; this, together with weakness, produced difficulty in walking, and the right leg began to drag. He was quite unable to walk in the dark or with his eyes shut, or to turn round quickly. The difficulty in walking had steadily increased, and both legs had become equally affected. Six months ago, total inability to get about made him take to his bed, the numbness increased, and he began to be troubled with jerking of the legs; the arms also got somewhat stiff. He noticed that, although he could grasp large objects well, he could not pick up small ones, such as pins. He had burning pains in the legs and shoulders, and shooting pains in the back and abdomen. During his whole illness he had suffered from indigestion and constipation; his legs had become thinner, and he had lost weight. His sight, which used to be very good, had gradually become dim, so that he could only read print when it was held very close to him. His hearing had remained good. The right foot and ankle had been swollen for a short time previously, but none of his other joints had been affected. He had lost all sexual desire, and for five years had had some trouble with his urine, sometimes having retention, at others continuous dribbling. He had never had any difficulty in speaking or in swallowing. On admission the patient was an emaciated man, complaining of inability to walk, dimness of sight, and shooting pains in the legs and thighs. Although unable to stand, he moved his legs freely in bed, and there appeared to be no loss of power in them, but there was some rigidity. The arms showed no loss of power; the grasp was strong with both hands, but there were slight tremors in the right arm when he used it. The muscles of the face were stiff and tremulous when strongly contracted. There was partial loss of control over the bladder, but none over the rectum. Sensation was impaired in the lower extremities, but not markedly; the patellar reflex was absent, and there was no ankle- or knee-clonus. Plantar reflex was brisk on both sides, the cremasteric absent. The lower abdominal reflex was slight on both sides, the epigastric absent. The right pupil was larger than the left, and both acted to light and to accommodation. There was no oculo-motor paralysis or colour-blindness. He had slight lateral nystagmus. There was well-marked atrophy of both discs, most marked on the inner side. There was no affection of speech or of hearing, but the sense of smell was much impaired. The radial vessels were somewhat thickened; the bowels constipated. The abdominal and thoracic viscera were free from serious disease. The urine had a specific gravity of 1025, was alkaline, and contained phosphates, but no albumen. During the rest of his life little alteration occurred in the symptoms which have been described, but cystitis with high temperature set in. He was also attacked with swelling, redness, and œdema of the metatarso-phalangeal joints on both sides and of the ankle-joints; he finally got bedsores, and died on December 2nd. The necropsy made next day showed the body to be that of a well-nourished, grey-haired old man. The legs were thin, and proportionately thinner than the arms. Both heels were black, as if from commencing gangrene. The external malleolus on the left side, as well as the sacrum, was in a similar condition. The ankle- and knee-joints were quite healthy. The heart, lungs, liver, and spleen presented no evidences of disease. The kidneys were healthy, but the bladder was evidently inflamed, as it contained three or four ounces of flaky purulent fluid, and its mucous membrane was of a deep purple colour. The intestines, pancreas, and suprarenals were all free from disease. The sheath of the spinal cord was distended with clear fluid, so that when the latter escaped the cord was seen to occupy but a small part of the tube formed by the dura mater. There was no undue vascularity, nor anything remarkable on external examination. On making transverse sections of the cord from below upwards, it was found that in the lower part of the lumbar region there were no abnormal appearances. But in the upper lumbar region three tracts of degeneration were visible. Two of them were in the lateral columns, which were symmetrically affected; the third consisted of the columns of Goll, which together formed a triangular area. The diseased parts were transparent, and had the colour of glue. The degeneration

could be followed in all three tracts as far as the medulla oblongata, but there it became less and less evident, and could not be seen at all in the upper part of the medulla and pons Varolii. The disease in the lateral columns appeared to be superficially situated, and was more extensive in the upper than in the lower regions of the cord. It occupied a larger area on the surface of the lateral columns, but penetrated less deeply into them than is usually the case in descending degenerations. It was impossible to say from a naked-eye inspection whether the columns of Goll were the only parts of the posterior columns which were diseased, or whether the degeneration affected those of Burdach as well. The cord was firm, and, with the exception of the regions already referred to, it appeared to be healthy. The only morbid appearances discovered in the brain were found in the optic nerves. They were both pale and flattened, and evidently the seat of degeneration. The corpora geniculata, corpora quadrigemina, optic thalami, and supposed cortical centres of vision were all normal in appearance. There were symmetrical ivory exostoses on the fourth and fifth ribs on each side in the posterior third of their length, but they were not so situated that they could press upon either nerves or vessels.

The symptoms in this case which point to lateral sclerosis are weakness of the limbs, tremulousness, jerkings, and rigidity; while numbness, pains, loss of sexual desire, difficulty with the evacuations, dimness of sight, and absence of the patellar reflex indicate more extensive disease. On microscopical examination the spinal cord proves to be the seat of very widespread changes; and yet the parts affected are so constant throughout that the affection cannot be looked upon as an indiscriminate one, but must be placed among the more complicated combined system diseases. It will be seen by reference to Fig. 33 that the regions affected are (1) the lateral columns; (2) the posterior columns; (3) the direct pyramidal tracts; (4) the anterior root zones; and (5) in a minor degree the grey matter of the anterior cornu. But it will also be observed that in the neighbourhood of the grey matter everywhere a zone remains healthy, and, in addition, a superficial tract of fibres situated between the crossed pyramidal and cerebellar tracts posteriorly, and the anterior root zones anteriorly, is unaltered. The pathological changes throughout the diseased areæ are the same, and must be considered to be those of chronic inflammation affecting mainly the nerve fibres, and in a far less degree the neuroglia; in other words, they represent a form of chronic myelitis. In the regions referred to are seen increase in the nuclei of the neuroglia, and in the white corpuscles within the vessels, hyaline swelling of the neuroglia, distension of the neurilemma, and disintegration of the white substance of Schwann (Figs. 34, 35, 36). Motor phenomena were those which were most strikingly affected during life, and sensory changes were far less marked. The pyramidal tracts, direct and crossed, and the anterior root zones, are undoubtedly motor regions; while the columns of Goll are afferent, and connect centres below with centres higher up; hence the disease is principally an affection of the motor systems of fibres. The escape of the small superficial area in the lateral column from pathological changes is exceedingly interesting, and marks it out as a tract containing some particular set of nerves. Gowers first called attention to this small tract of fibres, which appear to be afferent, and to degenerate centripetally. Several other writers have also mentioned it, among them Dr. Hadden, and Dr. Howard Tooth has a paper on it in St. Bartholomew's Hospital Reports for 1885, vol. xxi. The medulla oblongata, pons Varolii, crura cerebri, motor convolutions, anterior crural and optic nerves, and the triceps femoris muscle were all examined microscopically. The optic nerves were found to be atrophied, and there was an excess of nuclei in the anterior crural nerve and in the triceps femoris; but with these exceptions all the parts examined were free from disease.

I have detailed this case, rather than one of the more usual ones, where chronic affections are confined to less extensive systems of nerve fibres, in order to show that disease is a very complex process, however much we may endeavour to simplify our notions of it, and likewise to point out in how modified a form disease of the pyramidal tracts presents itself, if there be in addition pathological changes in other regions of the cord.

Before leaving the subject which I have thus far been illustrating—namely, the relation between diseases of the cerebral motor system and the production of chronic muscular spasm,—a few words must be added in answer to the question, Does spasm ever result from afferent stimuli reflected on to efferent fibres in the cerebral centres, or from diseases of the commissures? If we limit the term cerebral centres to the grey matter of the hemispheres and central ganglia, I know of no undoubted instances of reflex spasm in connexion with them. Convulsions, which may be due to such causes, do not come within the scope of the present lectures; and had I the time to treat of them, I should shrink from casting a shadow upon ground which has been so brilliantly illuminated by the genius of Hughlings Jackson. Several cases of tumours of the corpus callosum have come under my notice, and they have been published by Dr. Bristowe in *Brain* (vol. vii.) I cannot do better than quote the words of so distinguished a physician and pathologist in describing the symptoms which were observed in them. The chief characteristic features were: "1. Their ingravescent character, a character which they possessed in common with other cases of cerebral tumour. 2. The gradual coming on of hemiplegia, for the most part resembling in its distribution the paralytic symptoms usually attending hæmorrhage into one of the hemispheres, or softening due to embolism. 3. The association with the paralysis of one side of vague hemiplegic symptoms of the other. 4. The supervention of stupidity, associated for the most part with extreme drowsiness, a puzzled inquiring look when awake, a difficulty of getting food down the throat, and cessation of speech. 5. The absence of implication of the oculo-motor nerves, and of direct implication of other cerebral nerves; and, lastly, death by coma." From beginning to end of these cases no muscular spasm occurred.

In the remarks which the time at my disposal has allowed me to make on diseases of the pyramidal tract, and the part played by it in the production of spasm, I have tried to point out how numerous and varied the clinical phenomena may be, according to the level at which the pathological conditions occur, according to the method of attack—whether from within or from without,—and according to the presence or absence of disease of other portions of the central nervous system. I must now leave this division of my subject, and pass on in the last lecture to a consideration of the spinal motor system, and to so-called functional spasm.

ON A

BACILLUS CULTIVATED FROM THE BLOOD AND FROM THE DISEASED TISSUES IN SYPHILIS.

BY F. S. EVE AND A. LINGARD.

THE course of syphilis and the structure of the new formations indicate a probability amounting to a conviction that the disease is produced by a micro-organism, which gains access to the body by the primary inoculation, and is carried through the lymphatic system into the blood. We have, as opportunity permitted, continued to investigate the question of the etiology of syphilis since 1884, when one of us (Mr. Eve) showed bacilli in primary sore, indurated lymphatic gland, and secretion from sores, at a lecture on the Histology of Syphilis given at the Royal College of Surgeons. We have, as our methods improved, with increasing constancy demonstrated bacilli in numbers in many (at least twelve) primary sores, in indurated glands from three cases, in gummata from two cases, in a papular syphilide, and in condyloma. After many attempts we have latterly succeeded in that which has hitherto not been accomplished—namely, in cultivating a morphologically identical bacillus from the blood of syphilitic patients in two instances, and from syphilitic tissues in three instances. We offer brief details of the following observations in which positive results were obtained.

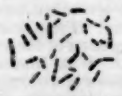
1. A pure cultivation grew after inoculation, under stringent precautions, of solidified blood-serum with blood from the lobe of the ear of a patient in the Lock Hospital, who had a profuse tuberculo-squamous syphilide. An indurated sore had existed two months, but he had taken no mercury. 2. Cultivation from the blood of a young man, an out-patient at the London Hospital, who had a general well-marked roseola, which had recently appeared. He had only taken

mercury three weeks. 3. A patient in the Lock Hospital was suffering with a hard sore, a bubo, and a general tubercular syphilide. He had taken no mercury. With his consent a papule with the subjacent cutis was excised with scissors from the front of the thorax, the skin being previously cleansed with a solution of carbolic acid (1 in 20), and the scissors heated immediately before use. A blood-serum tube was at once inoculated from the lymph exuding from the base of the papule, and in the course of a few days a cultivation similar to the preceding developed. On subsequent examination sections of the papule showed very numerous bacilli scattered in the connective tissue interspaces of the corium and around and within the small aggregations of round cells, which in parts invested the capillaries. Many of the bacilli showed the unequal staining to be presently described; others were uniformly stained (see Fig. 1). 4. A similar organism was also obtained in a cultivation from a much enlarged and distinctly indurated lymphatic gland from a man who had an indurated but somewhat ulcerated sore in the furrow

FIG. 1.

Bacilli in sections of a syphilitic papule. The three pale bacilli were unstained, and are possibly bacilli containing spores (950 diameters).

FIG. 2.



Cultivation from blood (950 diameters).

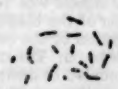
around the glans penis. The sore and the glans were excised at the same time, and in both bacilli were demonstrated. The sore had existed for one month. He left the hospital shortly after the operation and was subsequently lost sight of. The condition of the glands, the histological characters of the sore, and the history of the case, were all in favour of the view that he had syphilis. 5. Cultivation from lymph exuding from the base of a somewhat inflamed sore on the inner surface of the prepuce, which was removed by circumcision. There were distinctly indurated glands in both groins, and the patient subsequently developed secondary manifestations. 6. An impure cultivation grew after inoculation with lymph from the base of a freshly excised condyloma.

In none of the cases from which cultivations were obtained had mercury been administered for any length of time, and a long series of failures have led us to reject entirely cases which have been long under mercurial treatment. All these cultivations were composed of a very peculiar and somewhat polymorphous micro-organism (see Fig. 2), consisting of longer or shorter rod-like bodies, with rounded, and

FIG. 3.

Bacilli in section of a chancre (950 diameters).

FIG. 4.



Cultivation of bacilli from a phagedænic sore (950 diameters).

sometimes enlarged, or distinctly club-shaped ends; they were usually straight, but occasionally curved. The longer bacilli were as a rule unequally stained, and showed from three to five, or even eight, deeply stained segments united by unstained protoplasm and enclosed in a hyaline sheath. Organisms were observed in which the unstained material was drawn out in a thread-like filament connecting the enlarged end to the rest of the bacillus. The shorter organisms were composed of two elongated or oval masses of stained protoplasm separated by a clear interval, which relatively increased as the bacillus became longer. The transitional forms from these to the long beaded bacilli were patent to the observer. If the specimens after staining were not well washed, the organisms were uniformly coloured, or the beading was indistinct; hence in sections this peculiar characteristic could not be so clearly brought out; but it is well shown in Fig. 3, which was taken from a chancre in an undoubted case of syphilis. Many of the bacilli in sections of this sore were uniformly stained, or showed a clear median space such as may be seen in the short and in the uniformly stained bacilli in Figs. 1 and 2. Other slight shades of difference may be explained by the varying conditions under which the organisms grow in culture media and in the various textures of the body. The bacilli in the case above referred to existed in great abundance, either singly or in groups, in the connective tissue interspaces around and at the base of the sore; they were less numerous in the granulation tissue, a fact which may be explained by the observations of Ribbert on the resisting power of leucocytes to the growth of micro-organisms. This was their usual mode of distribution in chancres, but they were in many instances observed in lymph capillaries and within large clear cells. In lymphatic glands the bacilli were most abundant within and in the tissues adjoining the peripheral lymph channels, and were observed also in lymph cells. In sections of condyloma they were numerous in the connective tissue interspaces of the corium, still more so throughout the epithelium, and formed colonies on the surface. In gummata they were most numerous at the margins, where the disease was extending. In a case of phagedænic sore, a cultivation (see Fig. 4) closely resembling that above described was obtained from the ichor flowing from its surface, and later from the lymph flowing from the base of the sore after its free excision. Induration of the inguinal glands on both sides subsequently appeared, and syphilis was diagnosed. The general features and the staining reaction of this bacillus were the same as in that found in ordinary cases of syphilis, but the segmentation or beading was not so well marked. The cultivations obtained from syphilitic patients appeared as a thin, faintly yellow or brownish yellow, uniform, or slightly tuberculated layer on the surface of the media. The organism grew in solidified blood-serum, which it did not liquefy, and less readily in solidified hydrocele fluid and agar-agar. As regards its differentiation from the bacillus described by Alvarez and Tavel, as existing in normal smegma, we find that, in contradistinction to the latter, the bacillus here described is, after staining with fuchsin, decolourised by dilute nitric acid. Decolourisation occurs both in cultivations and in sections, and is also accomplished by oxalic acid. We have studied the bacillus of normal smegma both in scrapings and by cultivations, and are unable to identify it with that which we have found in syphilis. Nor does it seem in the least degree probable that in syphilis a non-pathogenic organism should be found in all the lesions, even in the internal organs. In sections known to be crowded with bacilli uniformly negative results have followed the use of Lustgarten's method. Our best preparations have been obtained by staining with a solution of Humbolt red in aniline oil and spirit, and decolourisation with spirit. The bacilli can also be demonstrated, but less satisfactorily, by Gram's method, and still less so by Weigert's solution of gentian violet. The inoculation of monkeys with our cultivations has so far been unsuccessful in inducing syphilis, but so has also inoculation with portions of chancres and of phagedænic sores. Nevertheless, the cultivation of a morphologically peculiar bacillus in two instances from the blood of syphilitics and from some of the chief lesions, and its recognition in the diseased tissues, have from analogy a striking significance in regard to the etiology of syphilis, and lead us to hope that by the continuation of our investigation we may yet experimentally prove that the organism described is the cause or the carrier of the disease. Owing to the attention which this question is now exciting in Germany we considered it necessary to publish this preliminary notice of our results.

A NOTE ON CYCLIC ALBUMINURIA.

BY WILLIAM COLLIER, M.A., M.D.,
PHYSICIAN TO THE RADCLIFFE INFIRMARY.

THE following case may prove of interest in connexion with Dr. Pavy's recent paper, reported in THE LANCET of March 6th, on Cyclic Albuminuria.

I was recently called to an undergraduate who was suffering from epistaxis. In answer to inquiries I learnt that for some years he had had at intervals similar attacks, which as a rule proved difficult to stop, though bleeding from other parts of the body, the result of cuts, or after the extraction of teeth, was easily controlled. The last attack of epistaxis occurred twelve months previously. He also

mentioned that a brother and sister were at times troubled with epistaxis. The bleeding was on this occasion easily controlled by the use of alum. Two days later I was again sent for, and informed that the bleeding had returned early in the day and had been very troublesome. On asking for a little of his urine, the patient at once volunteered the following information. Three years ago, when at Rugby School, after getting a chill, albumen was found in his urine. Twelve months ago, when thinking of becoming a candidate for the Indian Civil Service, he underwent a medical examination, and was warned that he would probably be refused, as his urine contained albumen. In consequence of this advice he gave up the idea. Since the first appearance of albumen three years ago his general health had been good and he had led a very active life, having on two occasions run in the Rugby-Crick (the annual long-distance cross-country steeplechase), and had gone in for long-distance running at Oxford. His condition was as follows:—Complexion pale; tongue clean; pulse slow and resisting. Heart: slight accentuation of second sound; no evidence of hypertrophy. Lungs healthy. Urine passed at the time of my visit (about 5 P.M.) was acid, sp. gr. 1030, contained a large quantity of lithates, and with the nitric acid tests showed about one-eighth albumen. I requested him, as is my invariable custom, in accordance with Dr. George Johnson's teaching, to send me a specimen of urine passed the following morning immediately on rising. On testing this with the ordinary nitric acid tests I could find not the slightest trace of albumen, though the tests were carefully repeated several times. Another specimen, passed about 1 P.M. on the same day, contained about one-eighth albumen. The microscope showed the presence of amorphous urates, but no casts could be found. As the patient was feeling very ill, and had been for the past few days much troubled with headache, I advised him to return home. He left Oxford the same afternoon, and I have not as yet heard from him.

The case is very incomplete, and as I had only one opportunity of testing the morning urine, I should not have reported it had it not seemed to me to suggest that possibly some of the cases remarked on by Dr. Pavy may at the end of another year or two develop all the usual symptoms of chronic Bright's disease. I cannot doubt that, in spite of the patient's apparently sound health until within the last week or two, the headache, epistaxis, high-tensioned pulse, slightly accentuated second sound of heart, and albuminous urine from which he suffered, were all secondary to slow changes in the kidneys, the result of the chill taken when at Rugby three years previously. Nor is it improbable that had I had frequent opportunities of examining his early morning urine, I should have found in such specimens, as in my former examination, an absence, or at the most a very faint trace, of albumen. On referring to my notes of the clinical lectures given by Dr. George Johnson while I was a student at King's College Hospital, I find the following remarks in a lecture delivered June, 1879, on Practical Matters connected with Bright's Disease:—"Remember, also, to test urine both after food and exercise, as it frequently happens that scarcely a trace appears in the urine voided before breakfast, while a large quantity may be present in that passed an hour or two after. *Exercise* may cause the presence of albumen when the urine is unaffected by food." In proof of this Dr. Johnson related the case of a medical man suffering from chronic Bright's disease who found albumen after exercise, but never after food if he *rested*. While house-physician to the Wolverhampton Hospital, in which district cases of acute and chronic Bright's disease are very common among the stokers and hammerers at the various ironworks, I had ample opportunity of testing the value of Dr. Johnson's teaching, and can recall more than one case in which the urine was most markedly influenced by rest, containing only the slightest traces in the early morning, but considerable quantities in the middle of the day. Such facts would suggest the danger of disregarding the continued presence of albumen in the urine at certain periods in the day, in spite of the absence of symptoms—unless, at any rate, it had existed a considerable number of years.

SWANSEA HOSPITAL.—The secretary of the hospital has received, from an anonymous donor, a cheque for £600 towards the funds of the charity. Upwards of £3000 have been received in a similar way during the past few years.

EXCISION OF THE ENTIRE UTERUS FOR CANCER.

WITH NOTES OF A SUCCESSFUL OPERATION.

BY CHAS. E. JENNINGS, F.R.C.S. ENG., M.S.,
ASSISTANT-SURGEON TO THE CANCER AND NORTH-WEST LONDON HOSPITALS.

THE object of two lectures which I delivered at the Cancer Hospital this session was to advocate vaginal extirpation of the uterus, for early cancer of the cervix, as the operation to be usually performed, to the exclusion of other methods of treatment, as soon as the diagnosis is established. History teaches us that in the past the mortality which attended excision of the entire uterus was so great that the operation could only be considered a desperate remedy to be adopted for desperate conditions; to-day it is struggling for a settled place in surgery, and for the near future why should not extirpation of the uterus be followed by a measure of success equal to that which now accompanies other severe but recognised surgical procedures on abdominal organs? From statistics contained in a valuable paper on extirpation of the uterus, presented to the Obstetrical Society by Dr. Wm. Duncan in January, 1885, it appears that of 137 cases of abdominal extirpation 38 recovered and 99 died, being a mortality of 72 per cent., but of 276 cases of vaginal extirpation 197 recovered and 79 died, being a death-rate of 28·6 per cent. The former group of operations were divided among seventy-one and the latter among sixty-nine surgeons, and therefore it seems right to conclude that, except under some special circumstances, the vaginal should be preferred to the abdominal method of uterine excision. This conclusion is strengthened by the fact that many of the operations in the two categories were performed by the same operators. For example: Martin performed 6 hysterectomies by the abdominal method, and all the patients died; he operated 60 times by the vaginal method, with 47 recoveries and 13 deaths. Of 8 abdominal extirpations of the uterus by Billroth, 3 recovered and 5 died; of 12 patients operated upon by the same surgeon by the vaginal method, 8 recovered and 4 died. Of 8 abdominal operations by Schroeder there were 3 recoveries and 5 deaths; whilst of 27 vaginal extirpations there were 19 recoveries and 8 deaths. Guided by these statistics, I elected to excise the uterus per vaginam in the following case, where the removal of the entire organ was the only means by which life could possibly be prolonged beyond a very limited period.

On Sept. 1st, 1885, Mrs. R——, aged thirty-five, who had been twice married, attended at the Cancer Hospital, complaining of an offensive, sanguineous vaginal discharge, associated with pelvic pain and other symptoms, of some months' duration—viz., since the birth of her last child. One of her sisters was reputed to have died some years ago of "cancer of the bladder." Physical examination disclosed an infiltration of the cervix uteri with ulceration around the os externum. The disease being apparently well localised, it was decided to destroy the neoplasm and surrounding tissue with caustic potash. This was accordingly done on Sept. 5th; several sticks of caustic potash were employed, the cervix being previously painted liberally with a solution of muriate of cocaine to mitigate the pain. After the separation of the sloughs bleeding returned, and the necessity for a greater destruction of the cervix being evident, the patient was anæsthetised on Sept. 15th. The chief portion of the diseased cervix was scraped away with a curette, posteriorly as far as the junction of the cervix with the vagina, and Pacquelin's thermo-cautery was applied freely to the raw surface. This operation appearing satisfactory, the woman was duly discharged and treated as an out-patient; but the pain and hæmorrhage having soon returned, she became confined to her bed at home, and at the request of Mr. Prowse, who had been summoned to attend her, I examined the patient in consultation with him on Oct. 28th. The general strength had then declined considerably, and there were marked signs of anæmia. The vagina was flaccid, the uterus enlarged and a little prolapsed. That portion of the anterior lip of the cervix which remained after the previous operations was infiltrated; the posterior lip was absent, so that the finger on being passed upwards along the posterior vaginal wall glided into a conical rugose cavity, whose apex seemed limited superiorly by the internal os. The speedy recurrence and the rapid growth of the neoplasm convinced

me that the only means of averting death lay in extirpating the uterus as soon as the necessary arrangements could be made for the operation. But I specially pointed out that the disease had now so far progressed that, even if the uterus were extirpated successfully, a secondary growth might appear at a later date. Moreover, the present condition of the patient would add to the danger of an operation severe *per se*, so that its choice or rejection had to be left to the decision of the patient and her relatives.

As to the methods for vaginal hysterectomy, there are two chief varieties. By the first, extreme and continuous traction is made upon the cervix, whilst the vagina is being severed and the uterine ligaments divided with scissors or knives and separated from the organ with the handle of the scalpel; according to the second plan, the uterus having been first drawn down in order to admit of the separation of the vagina either entirely or partially, the speculum is withdrawn, the operator's hand is introduced into the vagina, and the remainder of the operation is completed with the fingers. Blundell strongly advises that the operation should be conducted by the latter method. It is easy to understand how, by this plan, the danger of wounding the bladder, ureters, small intestine, or rectum is minimised. The chief uterine vessels can be ligatured or clamped before division, and the duration of the procedure diminished. By the former, injury to the important pelvic structures with the point of the scalpel can hardly be avoided; the hæmorrhage from the divided vessels obscures the field of the operation; the traction on the uterus drags down also the viscera which are in anatomical contiguity with it, and the satisfactory enucleation of the uterus is rendered most difficult. More than fifty years ago Blundell removed the uterus four times, with three deaths. His mortality was probably due to hæmorrhage, for he possessed no means of securing the divided vessels. The vaginal arteries will rarely give much trouble if unsecured; but vessels such as the uterine and ovarian arteries cannot safely be trusted unligatured, even though they be severed from the uterus by avulsion or be slightly twisted by flexion of the organ.

On Oct. 30th, 1885, at 2.30 P.M., I operated in the following manner. The anæsthetic was administered by Dr. Fenton-Jones, and Messrs. Prowse, Shaw, and Dove assisted me. The patient was placed in the lithotomy position, and the vagina was thoroughly syringed out with a carbolised solution and afterwards sponged dry. A duckbill speculum was then introduced into the vagina, the urine drawn off with a catheter, a full-sized curved sound passed into the bladder, and the viscus supported against the pubes by this instrument during the operation. The ulcerated cavity was plugged with iodoform wool (10 per cent.) and a stout silk ligature inserted through the cervix. The cervix and the upper part of the vagina were dusted with finely pulverised iodoform, and semilunar incisions were made, posterior and anterior to the cervix, through the vagina. Laterally the vagina was left intact, the parts here being those where the chief branches of the vaginal arteries enter the uterus. The speculum was withdrawn and traction made upon the ligature. But the cervix was so friable from the cancerous deposit that the ligature tore through the neoplasm, and it was found necessary to grasp the cervix as high upwards as possible with volsellum forceps. The left index-finger, well carbolised, was introduced through the opening in the posterior cul-de-sac between the posterior wall of the uterus and the peritoneum. The latter structure was slowly separated from the uterus as high as the body, and then torn through so that the exploring finger passed into Douglas's space. The right forefinger was passed through the anterior semilunar opening, and the bladder being well supported on the staff, no difficulty was experienced in separating the ureters from the uterus and roof of the vagina, and the peritoneum from the uterus for some distance, when it also was torn through. The speculum being introduced into the vagina again and the anterior vaginal wall elevated with a spoon, the narrow lateral strips of vaginal membrane which had been allowed to remain attached to the uterus were snipped through with blunt-pointed scissors. The hæmorrhage which occurred was so slight that it was disregarded. The uterine arteries, with the connective tissue surrounding them, were grasped with a pressure-forceps on each side of the cervix, and divided with scissors on the median sides of the forceps. Such profuse hæmorrhage occurred from the uterine extremities of these vessels that the wire of an écraseur was quickly adapted around the cervix and pushed upwards as far as possible above the mouths of the vessels to control it. This having been accomplished, the proximal extremities of the uterine arteries were ligatured and the pressure-forceps were removed. The wire of the écraseur was slowly tightened in order to effect a supra-vaginal amputation of the cervix, but very soon the wire snapped asunder, and there being no renewal of the hæmorrhage, the extirpation was proceeded with by introducing the left hand into Douglas's space, and with the tips of two fingers, which surmounted the right side of the uterus, catching a stout silk ligature passed upwards in front of the uterus on a blunt needle. A similar manœuvre was repeated on the left side of the uterus, and the ligatures, which included the round and broad ligaments, Fallopian tubes, and the other structures passing from the uterus on either side and contained within the alæ vespertilionis, were tied as tightly as possible. These ligatures were satisfactory in so far as they constricted the broad ligaments and their contents into more or less rounded cords. But they were unsatisfactory in two respects: first, they lay close to the sides of the uterus; and, secondly, they would not be tight enough to maintain their grasp upon the parts contained within them if the uterus were cut away. Accordingly, two straight Wells's pressure-forceps, each 6¾ in. in length with jaws 1½ in. long, were employed to grasp the broad ligaments on the outer side of the ligatures. The broad ligaments were carefully cut

FIG. 1.

through with scissors close to the uterus, which was easily extracted, and the two ligatures slipped away. The left ovary, rather larger than the normal, protruded into the vagina, and it, with the morsus diaboli, were removed with part of the tube after the application of a silk ligature. The pelvic cavity was carefully cleansed with carbolised sponges. All hæmorrhage having ceased, the vagina was packed with iodoform wool. The handles of the pressure-forceps, which just extended beyond the ostium vaginæ, were tied together, a T-bandage applied, and the patient placed in bed, the entire procedure having occupied an hour and a half.

The pressure-forceps were removed by Mr. Prowse thirty hours after the operation, and on Nov. 1st I saw the patient with him in consultation. There being then considerable abdominal pain and tympanites, the temperature having risen to 102° F., the pulse being wiry, and the features having a pinched expression, we decided to seek the advice of Sir Spencer Wells. He advised that the quinine and opium which had been given should be continued, and that the vagina should be kept free from any source of infection by frequent sponging with antiseptic solutions. He expressed a hopeful prognosis, which proved correct, for the temperature fell and did not rise again above 100°. The patient recovered without manifesting any further symptoms of anxiety, and all discharge from the vagina ceased on Nov. 20th. After the removal of the uterus its anterior wall was incised in the median line, as shown in Fig. 1. It

then appeared that the uterus was invaded by the new growth to a greater extent than we believed before the operation. There was no enlargement of the obturator glands at the time of the operation, but I learn from Mr. Prowse that recurrence has unfortunately taken place in the vagina. He writes as follows:—"March 7th, 1886: I first noticed some four weeks ago that the walls of the vagina were becoming somewhat harder than usual, and a fortnight ago some suspicious granulations made their appearance in the line of the cicatrix; these have now developed into well-marked ulcerations, and the vaginal walls have increased in hardness and have become quite nodular to the touch. I have not the slightest doubt as to the recurrence of the disease."

(To be concluded.)

NOTES ON DIPHTHERIA.

By N. E. DAVIES, L.R.C.P.I., M.R.C.S.

ANY researches, however humble, likely to throw light on the pathology and successful treatment of diphtheria must of necessity be acceptable at any time, for a disease the germ of which originates in filth, overcrowding, and bad sanitary arrangements is surely one subject to considerable amelioration and, under the improving conditions of civilised life, eventual extinction. What a holocaust of mothers' darlings this scourge of childish life claims as its tribute every year, and how pitiful it is to read in the obituaries of the daily papers constantly recurring cases where two, three, and four children are swept away by the terrible malady—a malady which, if the researches of Bretonneau, Loeffler, and other celebrated pathologists prove anything, is at first a local affection, and therefore one that ought, almost as a natural consequence, to be within the reach of medical treatment. It is a noteworthy fact that the part first attacked by this disease is that which is most accessible to the diphtherial bacteria—namely, the pharynx; and it is not surprising that the virgin soil of childhood, if I may use the expression, offers, as indeed it does to most zymotic diseases, the most favourable ground for the growth and development of the subtle poison of diphtheria—a poison that respects no condition of life and sweeps off with remorseless impartiality the offspring of the peer and the peasant.

During the twenty years it has been my province to treat this disease, I have found almost without exception that the outbreak at first has been due to the contamination of water or milk with sewage saturated with human excrement, or with the overflow of earth privies in low, damp localities, and an interesting illustration of this came under my notice two years ago, when it was my duty as medical officer of health to investigate the cause of an epidemic in a little village near Sherborne, where an entire family of five children were destroyed by it, and where numerous other cases occurred, some of which ended fatally. In this case a spring of pure water was conveyed down a hill in a leaden pipe; this opened into a stone trough, and from this trough it again passed underground through some earthenware pipes (which were not cemented properly together) into a second trough, and thence it ran as an open stream through a thickly populated village lying in a valley about a quarter of a mile long. Now, between the two troughs I have mentioned was an open privy, the liquid contents of which had percolated through the earth, and thence through the joints in the earthenware pipes into the second trough, afterwards, of course, contaminating the whole stream in its downward course through the village. Now mark this circumstance: a few houses near the first trough used their water from that, and these escaped the epidemic; whereas those who used their water from the second trough and from the stream suffered more or less, and the family in which, as I have mentioned, the five fatal cases occurred, went for their supply exclusively to the second trough, and therefore got the poison in its most concentrated form.

Now what does the history of this epidemic teach? That, at all events in its first incursion, the cause was strictly local, and that the bacterial poison had its origin between the two troughs, and in the most fatal period of the epidemic, infected its victims by the mouth and alimentary canal through drinking the water. I opine that, such being the case, it is only natural to suppose that in the spongy substance of the tonsillar glands the micrococcus finds a congenial home,[1] and from thence by fibrinous infiltration and inflammation invades the blood and the whole system, and this in some cases so rapidly as to destroy life in a few hours. I call attention to this fact simply to show that an epidemic, at all events at first, spreads by direct contact with the poison—i.e., by imbibition. Afterwards, as a matter of course, it may spread by other means, and its virulence be intensified by conditions of climate and atmosphere.

There are many secrets in nature yet to be unravelled, and one of them is—Why should epidemic diseases in certain seasons be more virulent, more general, and more widespread than in others? Their fungoid origin has its prototype in the vegetable world; in some seasons and localities the mildew, the oidium albicans, or, better still, the common mushroom, thrives luxuriously, then perhaps for years (at least in this neighbourhood) it becomes almost forgotten, not because the season is not propitious, but because some peculiar or climacteric influence is wanting; so, I take it, with diphtheria, that though sporadic cases may start a localised epidemic, yet such a one as that which visited England in 1858 and 1859 requires an occult stimulus, the secret of which is at present buried in profound darkness. Hence for the present it is wise and right, I believe, to agree with Loeffler, Empis, Kellog, Avery, Bretonneau, and many other celebrated pathologists, that the disease is at first a local disease, and that the constitutional symptoms depend upon general infection from this local lesion, and their mildness or virulence upon locality, atmospheric conditions, age, heredity, and the surroundings, healthy or unhealthy, of the victim, and perhaps I may add, the amount of the poison that has been imbibed; and acting on this belief, how important it is, when an outbreak occurs, to endeavour in every way to localise it and prevent its spreading by means of contaminated water, milk, and clothing, or by intercommunication with infected areas, and by energetic treatment to stamp it out. Some years ago I resided with a practitioner in Suffolk, where sporadic cases of diphtheria seem to be common, and I must say his mode of treating the disease was eminently successful: it consisted in mopping the throat and pharynx thoroughly out daily with dilute nitro-muriatic acid, and administering iron; he also insisted that, however ill the patient might be, he or she should be taken frequently into the fresh air. This is really almost identical with the treatment laid down by Bretonneau, Ellis, and others; it was rather rough treatment, it is true; but desperate diseases require desperate remedies; and as its aim was to destroy the local lesion from which all subsequent mischief arises, it must have been good and in the main correct—at least results proved it so.

My plan of treating the disease is as follows; it answers the same end, and does not alarm the patient; and, even at the risk of being considered egotistical, I must say that it has been highly successful in the large number of cases that have come under my observation during the last eighteen or twenty years. I assume that the case is treated in its early stage—the only stage in which local treatment can really avail; for when once the blood becomes impregnated with the fungoid micrococcus or bacteria of diphtheria, the poison is then deposited in organs, such as the trachea or the bronchi, beyond the reach of local treatment; and it becomes a question whether the constitution of the patient can eliminate the poison, and nature, generous nourishment, iron, &c., once more re-establish convalescence. In the first place, in any affection of the throat I lose no time in examining it, and watch carefully for the unmistakable washleather-like creeping deposit of diphtheria, or the symptoms of its sister diseases, follicular tonsillitis, croup, and scarlatina; if it turns out to be diphtheria, I give a mixture containing six drachms of the tincture of the perchloride of iron to five ounces of sweetened water, and at this strength, *undiluted*, I insist that the child shall take every hour for twelve hours a dessertspoonful (if the patient is older or an adult, a much larger dose), and that this dose shall be repeated, whether vomiting occurs or not. At this strength I find in that time, or a few hours more, that the growth has a shrivelled look and its vitality is destroyed. I then reduce the dose and extend the intervals, and, as I believe, with many others, that iron has some specific

[1] In 98 per cent. of the cases the pharynx is first attacked.

power of arresting the septic action of the poison in the system, continue it for two or three days or longer, keeping up the strength with strong beef-tea, milk, and port wine; if these cannot be taken, I use an enemata every four hours of equal parts of beef-tea, port wine, and cream or milk. The advantages of this treatment over the local application of caustics is that it reaches every part of the pharyngeal tract likely to be affected, and is, as I mentioned before, strong enough, given in this way, to destroy the vitality of the fungus of diphtheria; and let me here impress the absolute necessity of keeping a thorough draught of fresh air constantly passing through the room, for how can it be expected that a blood poison can be eliminated if it is continually breathed again? As well might one attempt to resuscitate a person dying from inhaling a poisonous gas without first taking the sufferer into the open air. It is needless to say that this treatment in the generality of cases should be supplemented by giving barley-water, sweetened in the case of children, containing two drachms of chlorate of potash or other antiseptic drug, to the pint, but I prefer chlorate of potash, for it is not unpleasant to the taste, and children will drink it readily.

Now, roughly speaking, this is the mode of treating the disease that I have found most successful, and one by the aid of which I have seldom had occasion to resort to more severe measures. The waywardness of a spoilt child will sometimes upset the best calculations by absolutely refusing to swallow anything; then it becomes necessary to resort to mopping the throat, and Bretonneau's mode of applying caustic solution is worth inserting here. He says: "In order to apply the acid to the base of the pharynx and upon the tonsils, I make use of a fine sponge about the size of a pigeon's egg, firmly fixed at the end of a flexible rod of whalebone, and I give to this rod a suitable curve after warming and softening it at the fire. Before touching the membranous spots on the throat, I take care to dip the sponge in concentrated acid and to press it so that it shall remained simply moistened. I take this precaution so that in the convulsive movements of the isthmus of the throat the expressed liquid may not extend its action beyond the point I intend to cauterise." This method, it will be seen, has the advantage of preventing the caustic solution going beyond the area affected and setting up violent inflammation of the pharynx or larynx. All the novelty I claim for my system of treatment is that I give much larger, stronger, and more frequently repeated doses of the perchloride of iron than I have ever seen advocated by others, and that if the destruction of the cause of the local lesion is the proper thing to do, as I believe it is, it answers the purpose, with the advantage of placing in the blood a drug which arrests the rapid deterioration of its healthy constituents produced by this disease, with its after-train of disastrous lesions.

Sherborne.

NOTE ON A CASE OF NERVE-STRETCHING FOR FACIAL SPASM, OPERATED ON FIVE YEARS SINCE.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
ASSISTANT-SURGEON TO THE MANCHESTER ROYAL INFIRMARY, AND SURGEON TO THE CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.

IN THE LANCET of August 27th, 1881, I published particulars of a case of stretching of the facial nerve for clonic spasm ("convulsive tic") of the muscles of one side of the face of two years' duration, occurring in a woman aged fifty-nine, who had previously been under the care of Dr. Ross. The operation, which was performed in March, 1881, was followed by complete paralysis of all the muscles supplied by the facial nerve on the corresponding side. About five weeks subsequently, the affected muscles gradually began to regain their power, and at the end of five months the paralysis had entirely disappeared. As no return of the spasm has taken place, and a period of five years has now elapsed since the operation, the cure may be regarded as complete and permanent, and on this account the case may, perhaps, be thought worthy of further record.

In a recent article by Prof. Zesas,[1] particulars are given of the results of nineteen cases of this operation collected from different sources. In only two other instances—viz., in one case operated upon by Zesas himself, and in another by Navratil—in addition to the one above referred to, has the cure been permanent. In four cases there was considerable improvement, while in ten the operation failed to give more than a temporary relief; in the remaining two cases the result was doubtful, as their subsequent history was not followed out. Inasmuch, however, as benefit has resulted in seven out of seventeen cases, Zesas is of opinion that the operation should still be performed whenever the spasm is not due to intra-cranial lesions.

[1] Wiener Medicinische Wochenschrift, Nos. 27, 28, 1885. An abstract of this paper, by Mr. C. Atkin, F.R.C.S., will be found in the Medical Chronicle, Jan. 1886.

FRACTURE OF THE BASE OF THE SKULL, WITH OPTIC NEURITIS; RECOVERY.

By W. T. JACKMAN, M.R.C.S., &c.

THE following case is of interest, showing, as did a case published by Mr. Sydney Jones in THE LANCET of Jan. 10th, that the complication of optic neuritis does not always indicate a bad prognosis in fractures of the skull.

M. H——, aged thirty, a coachman, of medium height, spare build, and temperate habits, was thrown from his horse on the evening of Dec. 6th, 1885. He was picked up in an insensible condition and carried to the stables, a distance of about one hundred yards, by two men, who left him for about an hour, and on their return, finding he had gone, they concluded he had only been stunned, and therefore did not say anything about the accident to anyone. Next morning he walked from his house (the lodge at the entrance of the drive) to the stables. He then complained to some men of headache, but they do not seem to have noticed anything peculiar about him. A short time afterwards he was missing and could not be found until 2 P.M., when he was discovered on one of the grooms' beds over the stable in a drowsy state and complaining very much of headache. When I visited him about 3 P.M. I found him drowsy and troubled with severe pain in the head, which was worse on the left side under the occipital bone, and suffering from cerebral sickness, which on inquiry I found had been persistent every half-hour or so all the morning. Tongue clean; bowels not open; temperature normal; pulse slow and laboured. On examining the head, some dried blood was found in the meatus of the left ear and a slight wound over the left occipital protuberance, which had evidently bled a little, and was surrounded by a swelling of about the size of a hen's egg. The pupils were sluggish to light. There were no other signs of fractured skull. The patient did not remember anything which had happened since he fell from the horse, and could not account for being in his present place. I found he had walked home after the men had left him the previous evening in the stable, had supper with his wife, passed a restless night, but there had been no vomiting. He had eaten a small breakfast and only complained of headache to his wife, who thought he was suffering from a bilious attack. I ordered ice to the head, perfect quiet, and ten grains of bromide of potassium to be taken every four hours.

Dec. 8th.—Consultation with my partner, Mr. T. Simpson, and diagnosis confirmed. Patient had passed a restless night. Vomiting less frequent; pain in the head still continues bad. Temperature 99°; pulse slow and feeble. Tongue slightly furred. Bowels not open. On examining the optic discs, the left was found to be normal, the right disc was hazy, and the veins were larger than normal, the arteries if anything smaller.—10th: Patient passed a bad night. Vomiting ceased. Bowels open after fifteen grains of calomel. Temperature 99·5°. Right disc red and edges hazy. Vessels as yesterday.—11th: Bad night. Temperature 100°. Pulse very weak. Right disc less red and veins smaller.—12th: Better night. Temperature 99·5°. Pulse stronger. Right disc less red and less hazy. Patient expresses himself as feeling better. Ice discontinued.—13th to 22nd: Gradual and steady improvement. Both discs normal. The patient was removed to his own home, and was able to resume his work on Jan. 16th, 1886.

It is interesting to note that, although the patient received the injury on the left side of the head, the bleeding was from the left ear, and that the inflammatory mischief was evidently on the left side of the head, as indicated by the persistence of the left hemicrania, yet the right optic disc

alone was affected; as far as could be judged vision was not affected, though exact information as to the field of vision was impossible under the circumstances.

This is the third case of fracture of the skull which occurred in our practice last year, and all recovered. One was in a child five years of age, who had bleeding from the ears, nose, and mouth, and well-marked symptoms of fractured base. The third was in a boy aged five years, with depressed fracture of the right parietal bone.

Coggeshall.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

A CASE OF ACUTE CHOREA WITH PREGNANCY; INDUCED PREMATURE LABOUR; RECOVERY.

(Under the care of Dr. A. J. POLLOCK.)

THIS case is a good example of the form of disease known as "chorea gravidarum," which appears to be much more severe than any other variety of chorea. Dr. Barnes[1] estimates the mortality at one to three, and gives a long table of cases, from which it would appear that this affection usually comes on during the first three months of a first pregnancy; and Dr. Wilks[2] has observed that a large proportion of those who are attacked are unmarried girls. Dr. Ross[3] gives the age of the majority of those affected as from twenty to twenty-three; whilst Trousseau[4] refers to sixteen instances of the disease in which the age was from nineteen to twenty only. The etiology of the disease is not clear. Trousseau would refer it to the chlorotic condition which often accompanies pregnancy, whilst others would ascribe it to the nervous condition of such patients. Dr. Wilks' theory would lend support to this view, and the case which we publish gives additional proof of its correctness. There does not appear to be any previous history of rheumatism or of rheumatic affections in the majority of the cases recorded, though in some there had been a previous attack[5]. The progress of this case after the uterus had been emptied of its contents was most satisfactory, the condition of the patient before this proceeding being most alarming.

A. T——, aged twenty, kitchen-maid, unmarried, was admitted on May 31st, 1885, suffering from chorea. Her illness dated from May 28th, and its onset appeared to be unusually sudden. No change in her demeanour was noticed until the movements began, and on the third night of her illness she was slightly delirious. There was no history of rheumatism in the family, nor had the patient ever suffered from rheumatic fever herself. Her mother suggested that the cruelty of one of the other servants had some causative relation to the attack, as her daughter had often complained of it, and during the onset talked of nothing else.

On admission, three days after the supposed commencement, the patient presented all the usual phenomena of chorea. The movements were more marked in the upper than in the lower extremities; both sides were equally affected. No paresis could be made out. She appeared to understand most of what was said to her, but was quite unable to give any connected account of her illness. Articulation was indistinct. No physical signs of disease could be found in the chest or abdomen. The patient was about four months pregnant.

On June 3rd (four days after admission) her condition became much worse. She was now delirious all day, and paid no attention to anything that was said to her. The movements were so violent that partial restraint was employed. Arsenic, bromide of potassium, chloral hydrate, and conium were one after another employed in large and frequently repeated doses, but with negative results. The typhoid state rapidly supervened, though the temperature remained normal.

On the afternoon of the 12th the os uteri was dilated by the finger. During the night there was a copious blood-coloured discharge, and in the morning a fetid four months' fœtus was found in the vagina. The cord was fairly firm. A solution of perchloride of mercury (1 in 1000) was ordered to be injected into the uterus twice daily.

From this time improvement was gradual and continuous. In two days (June 15th) simple questions could be understood and answered, and the movements were distinctly less violent. The temperature rose to 101° on the 15th, reaching 104·5° on the 16th, but fell to normal on the 17th. On the 23rd it rose to 102°, but regained its normal character the same day. On the 27th the injections, which had been reduced to one daily, were altogether discontinued. The movements had almost ceased, but the patient's intellect was still clouded. At the time of discharge (July 22nd) the movements had altogether ceased, and, beyond being rather dull and stupid, the patient was in very good health.

[1] Obstetrical Transactions, vol. x., p. 147.
[2] Pagge's Principles and Practice of Medicine, vol. i., p. 641.
[3] The Diseases of the Nervous System, vol. ii., p. 769.
[4] Clinical Medicine, vol. i., p. 304.
[5] Playfair: Science and Practice of Midwifery, vol. i., p. 237.

LIVERPOOL INFIRMARY FOR CHILDREN.

CROUPOUS PNEUMONIA AND GANGRENE OF THE LUNG; DEATH; NECROPSY.

(Under the care of Dr. OXLEY.)

THE patient, a boy six years of age, lost both parents from lung disease, a sister had a leg amputated for disease of the knee, while another sister suffers from keratitis and caseous cervical glands. The patient has always been delicate, and for some months he has had a cough. When admitted into hospital he was found to have a very rickety chest, his temperature was 103°, and his respiration 44 per minute. His cough was frequent, and he had a scanty, viscid, yellow expectoration; the breath was rather foul; he had also signs of consolidation of the lower lobe of the right lung. In two days the breath became extremely offensive, the odour being fæcal in character and permeating the whole ward; signs of a cavity also appeared in the base of the right lung. The consolidation gradually crept over the whole lung, the pulse becoming more and more feeble. The smell persisted, though not quite so offensive as at first, owing to antiseptic inhalations. The patient died after being in hospital thirteen days.

After death the right pleura was found generally adherent; the right lung was in a state of grey hepatisation; the lowest lobe contained a cavity about the size of a small orange; the walls were rough and of a dark greenish-blue colour, it contained some ichorous fluid; there was a second smaller cavity in the middle lobe. The lung substance round these cavities was of a pale greenish-blue colour; the tissue in the upper lobe was of a pale fawn colour, and was absolutely airless. The left lung was œdematous. The mediastinal and bronchial glands were caseous, and in most of them the caseous material was more or less calcified. None of the glands were gangrenous. There was no heart disease. No tubercle was found in any part of the body.

MULTIPLE ABSCESS OF THE LIVER FOLLOWING IMPACTION OF A PIN IN THE VERMIFORM APPENDIX, COMPLICATED BY MENINGITIS.

(Under the care of Dr. M'CLELLAND.)

The patient, a girl aged eight years, came under observation early in the year; she was then complaining of fever and pain in the right shoulder. Her family history was good, and she had been a strong healthy child. It was found after death that fourteen months before she had swallowed a pin in school; about that time she complained of pain in the region of the right groin. Nine weeks before admission into hospital she caught a cold, and during the next week was feverish and had pain in her right shoulder. She had then no cough; her complexion was muddy, but never yellow. When she came under notice she had a high temperature, which tended to remit in the morning; she was very restless and thirsty, perspired profusely at times, and her urine was normal. She was constipated, though in the later stage of her illness she had some diarrhœa; there was nothing abnormal to notice in the motions. There were signs of con-

solidation of the base of the right lung. For some days nothing definite was noticed in the abdomen, but the liver enlarged rapidly, ultimately reaching to the level of the umbilicus. For a week before death the patient was in a typhoid condition, and two days before she died she had convulsions localised to the right side, and involving the mouth, arm, and leg. She never had any jaundice, her complexion being muddy throughout the illness. She died from compression of the brain having been twenty-six days in hospital.

When the body was examined, the liver was found very greatly enlarged, weighing 4 lb. 8 oz.; the upper part of the right lobe contained an abscess cavity the size of a small orange, full of thick pus; the whole of the right lobe was honeycombed by abscesses of very varying size, the largest being about the size of a filbert; the left lobe, though free from apparent disease, was very much enlarged. The gall-bladder contained a fair amount of golden yellow bile; there was no obstruction of the bile-ducts, and the upper part of the intestine was bile-stained. The vermiform appendix was thicker and longer than usual, and was adherent half an inch from its distal end to the pelvic wall; on separating the adhesion, the wall of the appendix was found very thin and ulcerated on its inner surface; the adhesion was found to correspond to the head of a pin of large size, which was impacted in the appendix head downwards. There was no sign of recent inflammation. The mesenteric and lumbar glands were normal. On opening the skull, the cranial sinuses were found to be distended with firm clot; about the middle of the longitudinal sinus the clot contained a drop of pus. There was a patch of intense congestion around the fissure of Rolando and over the paracentral lobule of the left side, the pia mater of these parts being dull and sticky. An abscess about the size of a large pea was found in the cortex of the right occipital lobe near its centre.

There can be little doubt that the hepatic abscesses were due to a septic embolus or to several emboli carried by the mesenteric veins to the liver. A very similar case is to be found in Dr. Murchison's book on the liver; but in that case there was only ulceration of the vermiform appendix, no cause for the ulceration being found. The present case would suggest that some foreign body was also the original cause in Dr. Murchison's case.

CUMBERLAND INFIRMARY.

CASE OF FÆCAL ACCUMULATION CAUSING SYMPTOMS OF PARTIAL OBSTRUCTION; REMARKS.

(Under the care of Dr. LOCKIE).

THE following notes have been furnished by Mr. G. Francis Smith, house-surgeon.

Robert M——, aged sixty-eight, was admitted on Jan. 17th last, complaining of distension and pain in the abdomen, with constipation. He had for some time previously (between two and three weeks) been suffering from frequent small watery evacuations, which had been treated as an ordinary case of diarrhœa.

On admission his tongue was slightly furred, the abdomen distended and tympanitic, but the pulse good. There was nausea without vomiting. He was given a dose of castor oil and opium, which produced a small evacuation from the bowels and temporary relief to the distension, nausea, and discomfort. On the following day the dose was repeated, without result. From this time up to Jan. 25th (eight days) the abdomen was more or less distended, the movements of the intestines, seen through the abdominal parietes, and constipation persistent. No tumour or localised fulness could be detected through the abdominal wall or per rectum. On the 25th a long œsophageal tube was passed up the rectum. The tube seemed to meet with an obstacle about six inches up the gut, and having passed this gave free exit to a large quantity of flatus, its escape being assisted by pressure on and kneading of the abdominal wall. In a few minutes the abdomen was flattened and flaccid, but even then nothing abnormal could be discovered on palpation. The flatus, however, reaccumulated in a day or two. From time to time various drugs were employed as aperients, or with a view of improving the tone of the gut, as it was thought the distension might be due to atony. Aloes and myrrh, sulphur and guaiacum, strychnia, belladonna, and ergot were in turn given, without effect. Galvanism was also employed. The flatus reaccumulated and constipation continued. The distension was relieved every second or third day by the use of the long tube. At the third introduction warm water was injected high up into the gut, and by this means exit was given to a quantity of frothy, light-coloured fæces, containing a number of black currant skins. On being questioned, the patient declared that "he had not tasted a currant since Christmas Day, but at that time he did eat a large amount of currant cake." For the next four or five times of the long tube introduction, some of these currant-skins came away with the fæces. For rather more than three weeks the bowels were systematically relieved in this manner, constipation otherwise remaining persistent. All this time no tumour could be felt in the abdomen; but from time to time the patient felt sick, lost appetite, and had a coated tongue and rather offensive breath. At the end of this time, on one occasion the tube was allowed to remain in the bowel for about half an hour. Some feculent matter and flatus passed during this time. The patient then had a hot bath, and after this his bowels acted naturally for the first time since admission. In two motions about six quarts of fluid feculent matter were passed, containing large quantities of black currant skins similar to those already noticed. From this time no reaccumulation occurred, and the bowels became regular, without having recourse to drugs. The patient was discharged on March 10th, apparently quite well.

The case is of interest, as showing how accumulations may occur, giving rise to obstructive symptoms, without being discovered by physical examination; and also showing the value of the long tube as a diagnostic and a therapeutic agent. Although no tumour could be felt, it was evident that the obstruction, however brought about, was in the large intestine and probably in the sigmoid flexure. The colon, when distended, could be easily traced, and its vermicular movements were very marked. Relief was never given until the tube had entered about six inches, and frequently not until a foot had been introduced.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Intra-cranial Cyst.—Acute Nephritis in Lambs.—Hydatid of Liver embedded in large Syphilitic Deposit.—Valvular Obstruction of Ureter.—Embolism of Abdominal Aorta.—Septic Aortitis.

AN ordinary meeting of this Society was held on Tuesday last, Dr. J. S. Bristowe, F.R.S., President, in the chair.

Mr. R. W. PARKER read the report of the Morbid Growths Committee on the Intra-cranial Cyst shown by Dr. Macdonald. In the opinion of the committee the cyst was a subdural hæmatoma; they did not think that there had been any new formation in the cyst wall, which was possibly of congenital origin, or due to hæmorrhage produced during birth. Fresh hæmorrhage appeared to have occurred, and possibly explained the paralysis. Mr. Shattock and Mr. Parker signed the report.

Mr. ROGER WILLIAMS exhibited specimens of Acute Nephritis in Lambs. The disease began soon after birth with difficulty in walking, the new-born falling down and lying on one side, sometimes with choroid movements, without loss of consciousness, without difficulty in breathing or cough; sucking was not impaired nor the appetite. The disease appeared to attack the lambs of ewes imported from Scotland, and especially those whose female parents were served by a ram who was far from vigorous, having to spend his strength on too many ewes. At all events, it was found that if a ram only served ten ewes the progeny were vigorous and did not become affected with the disease. Mr. Williams had examined two lambs, one that died of the disease and another killed at three weeks old. The urine was albuminous and acid, whereas it should have been alkaline. There were no renal casts, crystals, pus, or blood. The capsules of the kidneys stripped off easily, exposing a surface studded with congested stellate veins. The cortex was swollen and soft, pale and yellowish in colour, whilst

the pyramids were firm and deep-red in colour. The disease was an acute tubal nephritis; the tubular epithelium was much degenerated, not staining with logwood, whilst the interstitial tissue was normal. The changes in both cases were identical, though one was in a more advanced condition than the other. Nothing abnormal was detected in any of the organs, and the spinal cord was healthy. Some of the lambs were born with the disease, and soon succumbed.—Dr. PYE-SMITH said the normal reaction of lamb's urine whilst suckling was acid.

Dr. G. N. PITT showed a specimen of old Hydatid of the Liver embedded in a large Syphilitic Growth. A man aged thirty-nine came last year under Dr. Goodhart's care, with a large painless globular tumour, with a firm sharp lower margin, occupying the left lobe of the liver and extending down nearly to the umbilicus. Thirteen years previously he had contracted syphilis, and three years later had been castrated for syphilitic disease of the testicles. In 1878 he had an attack of slight aphasia and right hemiplegia, which soon improved. In 1881 he was under Dr. Fagge's care with a large, painful, irregular tumour connected with the liver, which was diagnosed as of gummatous and lardaceous nature. Since then it had diminished in size. The urine at this time was normal. Previous to this he had worked as a ship's carpenter, and a few months later he was able to resume his work. On his admission in 1885 he was also suffering from œdema, and was passing urine of specific gravity of 1007, containing one-third albumen and in quantity about seventy ounces daily. After eight weeks he became uræmic and died. At the necropsy large white kidneys, somewhat lardaceous, were discovered. The left lobe of the liver, which weighed 146 ounces, was entirely occupied by a dense white fibroid mass, measuring six inches and a half by three inches and a half, which enclosed a contracted cavity two inches in diameter filled by numerous gelatinous-looking capsules one inside the other, evidently the remains of an old hydatid cyst. There was a bile-duct (stained yellow) in the middle of this fibroid mass, the adjacent structures being stained yellow. The author drew attention to the great rarity of such a large syphilitic mass without any evidence of caseation or breaking down, and compared this case with two of lymphadenoma occupying the left lobe of the liver, which had occurred at Guy's Hospital. The line of demarcation from the healthy liver structure in all was well defined. The growth in each case was intercellular—i.e., along the lymphatics,—compressing the liver-cells and destroying them; yet some bile-ducts and liver-cells persisted. Undoubtedly some of the large mediastinal tumours and lymphadenomata were syphilitic, and he suggested that the deposit caused by the irritation of the hydatid in the syphilitic subject was closely allied to, if not identical with, some of the large masses which have been described as lymphadenoma. The fibrous trabeculæ were parallel to one another beneath the capsule, but elsewhere they ran irregularly, and the deposit was in the liver substance, and not merely a laminated deposit round the hydatid. When a mediastinal tumour or a lymphadenoma gives the lardaceous reaction it is probably syphilitic.—Dr. SHARKEY referred to a case, published in the Transactions, of syphilitic perihepatitis that caused considerable discussion as to diagnosis during life. The patient died with profuse hæmatemesis. The capsule of the liver was found to be from one to three inches thick, and sections showed many scattered minute gummata, proving its syphilitic nature.—Mr. S. G. SHATTOCK said that in specimens of diffuse interstitial hepatitis there were always miliary gummata to be found, which he regarded as a *sine qud non* of diffuse syphilitic lesions.

Dr. SAINSBURY read notes of a specimen of Valvular Obstruction of the Ureter. The patient was a female aged thirty-four, admitted into the Royal Free Hospital in a state of stupor, and she died next day comatose, having had epileptiform seizures. One year before admission she had had erysipelas, and had vomited frequently ever since; and once she had hæmatemesis. Epigastric tenderness and albuminuria were observed after admission. At the necropsy the left kidney was completely pyonephrotic; the series of compartments were completely filled with soft white material like thick white paint. The ureter in its upper two thirds was still patent, but its calibre was much diminished; just before entering the pelvis it enlarged suddenly; two small valve-like flaps were found guarding the entrance to the pelvis. The lower third of the ureter was impervious, and no opening into the bladder could be detected. The right kidney was granular. Ebstein had alluded to the existence of an atheromatous material in hydronephrotic sacs. Haller had described valvular obstructions in the ureter, different, however, from the specimen shown.—Mr. SHATTOCK said there was evidence that the interior of the dilated kidney was decidedly diseased; an ulcerative undermining of the mucous membrane of the pelvis might have produced the valve-like projections. He asked if the case were one of tubercle.—Mr. R. WILLIAMS said that in cancer of the uterus with hydronephrosis the ureters presented constrictions and valve-like septa.—Dr. BRISTOWE was inclined to agree with the views of Mr. Shattock.—Dr. H. SAINSBURY said there was no evidence of tubercle in the rest of the body. Tubercle never went on to such complete destruction of the kidney. It was difficult to understand that such perfect valves had been formed by ulceration.

Dr. PRICE (Reading) showed specimens of Embolism of the Abdominal Aorta. The first came from a woman, aged thirty-three, who was admitted into Guy's Hospital in 1883 with abdominal pain and vomiting; there was no history of alcoholism or syphilis. A presystolic bruit was discovered, but no thrill. Eight days after admission the right lower extremity became swollen, mottled, and cold, and finally gangrenous. The left lower limb presented the same changes later on. The urine also was offensive and dark-coloured. At the necropsy the frontal convolutions of the brain were coated with lymph; some thickening of the cerebral arteries and an embolus that did not totally obstruct the left middle cerebral artery were discovered. Mitral stenosis and roughening of the auricular aspect of the valve were present. The ante-mortem clot in the iliac arteries and aorta communicated by means of a small attenuated clot with a post-mortem clot higher up the abdominal aorta. The walls of the bladder and uterus were black and gangrenous. The second case was that of a woman aged forty-six, whose right limb became gangrenous, and was amputated thirteen years ago. In 1883 she was readmitted into Guy's Hospital with albuminuria and gangrene of the other leg. No evidence of cardiac disease was detected during life. At the necropsy some old pericardial adhesions were found about the apex of the left ventricle, whose anterior wall was much thinned and contained several yellowish grains on section, possibly of gummatous nature. The thrombosis extended up to the renal arteries; the embolus had been dislodged from clots in the left ventricle. The vena cava inferior was almost completely obliterated; this was probably the cause of the gangrene of one limb thirteen years previously. The bladder and uterus were healthy.—Dr. J. S. BRISTOWE was not satisfied with the evidence of the embolic origin of the aortic thrombosis. So far as his own post-mortem investigations went, he had not been able to find a single undoubted case of embolism of the aorta due to emboli from the valves of the heart or clots in its ventricles.—Dr. S. TAYLOR referred to a case of abdominal aneurism leading to aortic thrombosis that had been under the care of Dr. Bristowe. Pain and diarrhœa with paraplegia were the symptoms of sudden onset.—Mr. MARMADUKE SHEILD had recorded a case of Embolism of the Aorta, with gangrene of the limb, in THE LANCET of 1880. In another case he had examined, the aorta and heart were extensively diseased, and there seemed to be no doubt of the embolic origin of the aortic obstruction.—Dr. SAMUEL WEST had recorded in the Pathological Transactions a case in which there was no possibility of doubt as to the embolic nature of the thrombosis of the arch of the aorta.—Dr. CARRINGTON also referred to two cases of embolism with mitral stenosis, with clots in the auricular appendix, in which the source of the emboli was unquestionable.—Mr. R. WILLIAMS mentioned the case of a man aged fifty-five, who had embolism of the aorta, the embolus having come from an aneurysm of the abdominal aorta higher up than the obstruction.—Dr. PRICE, in reply, thought there was less doubt of embolism in the second case than the first.

Dr. C. TURNER read a paper on Septic Aortitis, illustrated by four cases. The first was that of a woman aged sixty-two, who had incompetence of the aortic valves. Ulcerated areas of various size and form were seen in the aorta; the endarterium was undermined in many places; much atheroma and calcification was present; the changes were less marked in the abdominal aorta. Masses of micrococci at the base of an ulcer occupying the deeper layers of the inner coat were readily stained with gentian violet after the tissue had been kept in a dilute solution of hydrochloric acid for a short time. Cholesterine crystals also studded the diseased areas. The heart was

much enlarged and dilated, and there was some thickening of the valves. The kidneys were granular. She had suffered from rheumatism. The second case was a woman aged forty-eight, in whom the thoracic aorta contained a large mass of fibrinous substance immediately above the aortic valves, and several smaller masses higher up; there were also patches of endarteritis on which the fibrin had formed. The heart was normal. She had had a severe burn of extensive distribution, followed by suppuration and fever. There were two chronic ulcers in the stomach. The third case was a man aged forty-five, who also had much pyrexia; death was due to intra-thoracic hæmorrhage from the left internal mammary artery, the result of a stab in a public-house quarrel. Atheromatous patches were seen in the aorta, and soft fibrinous masses, the size of a small nut, were also present on the raised patches of the endarterium. The aortic valves and heart were normal. In another case, that of a man aged thirty-nine, who underwent an operation on the left thigh, similar changes were found in the aorta. Microscopically, in all the specimens there was to be seen a leucocytal infiltration of the arterial coats, especially about the vasa vasorum. In all the cases there was a source of septic infection. The toxic products of the mycotic growth probably originated the aortitis, the micrococci in the blood finding a suitable nidus for growth in the atheromatous patches. The *cloudy* state of the fibrin was possibly caused by micrococci in a less vigorous state of growth than existed in the arterial coats. The cases were clinically corroborative of Orth's experiments in animals.

The following card specimens were shown:—Mr. Sydney Jones: (1) Malformation of Foot; (2) Peculiarly shaped Calculi. Dr. Sharkey: (1) Meningeal Hæmorrhage; (2) Retroversion of Mitral Valve; (3) Stenosis of Mitral, Tricuspid and Aortic Valves. Dr. Pye-Smith: Cystic Teratoma from an Infant. Dr. C. Turner: (1) Kidneys with Necrosis of Pyramids; (2) Jejunum with Perivascular Hæmorrhages. Mr. Lunn and Dr. Larder: Aortic Aneurysm. Dr. Cayley: Child with large Hairy Mole. Dr. Seymour Taylor: Angio-sarcoma of Brain. Mr. E. H. Fenwick: Stone impacted in Prostatic Urethra. Dr. A. H. Robinson: Hypertrophied and Dilated Bladder, with adherent Pericardium.

MEDICAL SOCIETY OF LONDON.

Traumatic Hydronephrosis.—Relation of Tonsillitis to Scarlatina and Diphtheria.

AN ordinary meeting of this Society was held on Monday last, Mr. R. Brudenell Carter, F.R.C.S., President, in the chair.

Dr. LOWE read a paper on Traumatic Hydronephrosis. The patient was a man aged twenty, who was run over by an empty waggon. There was great distension of the abdomen, and ten weeks after the injury a large tumour had formed in the right hypochondriac and lumbar regions. A group of large veins existed over the swelling. There was no hæmaturia after the accident and no evidence of previous calculus. Nine pints of perfectly clear fluid were withdrawn by means of a trocar and cannula; it was of a highly albuminous character. Later still, eight and a half pints were drawn off at a second tapping, and the cyst was injected with a diluted tincture of iodine. The diagnosis of hydatid tumour was also excluded, not only by the albuminous nature of the fluid but by the absence of hooklets, &c. In five of fifteen reported cases of traumatic hydronephrosis the ureter was obstructed by cicatricial tissue resulting from the traumatism. Cases of traumatic hydronephrosis offered a much greater chance of cure by tapping than did hydronephrosis from internal disease. In his own case he believed the ureter had been obstructed by a blood-clot.—Mr. BERNARD PITTS related the case of a girl aged nine, who was admitted into the Hospital for Sick Children. She had been run over by a hansom six weeks previously. There was a large left-sided hydronephrosis, from which forty-one ounces of clear urine having a slight trace of albumen were withdrawn. There was ·14 per cent. of urea in the fluid. Gentle massage retarded somewhat the accumulation of fluid, but a third tapping had to be performed and forty-four ounces of fluid withdrawn. By a more thorough massage carried out systematically the tumour only slightly refilled, and in a few weeks altogether receded so that nothing abnormal could be detected. The child has remained well ever since. In this case Mr. Pitts regarded the obstruction as due to blood-clots in the ureter. In another case related, a child passed casts of the ureter, the casts being clearly of hæmorrhagic origin.—Mr. WALTER PYE narrated the case of a gentleman who received a spear-wound in the abdomen, which was followed by hydronephrosis. Tapping was performed and the case ended in complete recovery. It happened five years ago.—Mr. DAVIES-COLLEY also related a case of right-sided hydronephrosis in a man aged fifty-five, who met with a railway accident. It was probable that the man had had a calculus prior to the accident; there was, at all events, a history of pain and hæmaturia. Massage in cases of traumatic origin might be productive of mischief. He did not think that blood-clot in ureters could be absorbed.—Dr. SAMUEL WEST spoke of the pathology of so-called traumatic hydronephrosis, and considered that some cases might really be instances of retro-peritoneal or peritoneal effusion.—Dr. LOWE, in reply, considered that hæmorrhage from the kidney could easily give rise to clots which would obstruct the ureter. A small hydronephrosis might be partially or totally absorbed. The ultimate result could not always be known; even when cases appeared to be cured fresh effusion might again occur.

Dr. HINGSTON FOX read a paper on Tonsillitis and its relation to Scarlatina and Diphtheria, excluding Catarrh and true (suppurative) Quinsy. The writer first described common, follicular, or septic tonsillitis, giving a group of cases in illustration. This was a brief and symmetrical disease, often affecting several members in one household, and frequently traceable to bad hygienic conditions. Intermediate between this affection and the tonsillitis of the specific fevers lay so-called infectious sore-throat, the pseudo-diphtheritis of Dr. Ashby. The outbreaks recorded in the proceedings of the Medical Society by Drs. Routh and Crisp were shortly described, and reference was made to various other outbreaks reported in recent years. It was suggested that the occurrence of these mixed forms of tonsillitis, often showing a short-lived infectiousness, gives ground for regarding scarlatina and diphtheria as primarily forms of tonsillitis which have acquired specific properties. On this view the poisons would enter the lymphatic system at the tonsils, which would be inflamed as a first effect. The function of the tonsils is, Dr. H. Fox thinks, connected with the reabsorption of the surplus saliva, and it is suggested that these glands absorb the poisons from the saliva. The poison of a common tonsillitis has little more than a local effect; that of a scarlatinal tonsillitis is able to reproduce itself in the system indefinitely without deterioration, and in this power of reproduction Dr. Fox would see the characteristic of a species of disease.

HARVEIAN SOCIETY.

Paralysis of Tongue, Palate, and Vocal Cord.—Treatment of Obscure Forms of Metrorrhagia.

A MEETING of the above Society was held on Thursday, April 1st, J. Hughlings Jackson, M.D., F.R.S., President in the chair.

The PRESIDENT showed a patient who had Paralysis and Wasting of the Right Side of the Tongue, and Paralysis of the Right Half of the Palate and of the Right Vocal Cord. He had recorded several cases in which these three symptoms occurred together (London Hospital Reports, 1864 and 1868). There was also paralysis and wasting of the left supinator longus, biceps and brachialis anticus, deltoid, supra-spinatus, and infra-spinatus: these muscles did not act to the faradaic current; in all anodal closure contraction was greater than kathodal closure contraction, except that the infra-spinatus did not react to forty cells. There was a patch of anæsthesia (to touch and to pain) on the summit of the left shoulder, roughly circular in outline and about six inches in diameter. The eyes were examined by Mr. Marcus Gunn. The left pupil was very slightly larger than the right; there was no difference in the palpebral apertures. The left pupil did not dilate in shade nor react to light (directly or consentaneously). During convergence, which was short and partial, the left pupil contracted as well as the right. Accommodation was defective in both eyes. The left pupil underwent changes in size during ordinary movements of the eyeball, tending to contract on looking downwards or inwards, and to dilate on looking upwards or out-

wards. Dr. Wilson, to whom the President was indebted for most of the notes of the case, had twice observed sweating on the left side of the face, a symptom of which the patient complained. Considering that there was a clear history of syphilis and that the symptoms developed slowly, Dr. Hughlings Jackson thought there was syphilitic disease involving nerve roots. He expressed the opinion that the right hypoglossal nerve and the upper (bulbar) part of the right spinal accessory nerve were involved, and also some of the spinal cord nerve roots entering into the left brachial plexus. He had never, with one doubtful exception, seen paralysis of the palate in cases of disease of the portio dura nerve; deviations of the uvula were common in healthy people. He thought that lesion of the bulbar part of the spinal accessory nerve caused the palatal and vocal paralysis. The pupillary condition on the left was not like that occurring with paralysis of the cervical part of the sympathetic, except in that the pupil did not dilate when shaded. According to Ferrier, the particular spinal nerve root supplying fibres for dilatation of the pupil, or for inhibiting the action of the third nerve (Gaskell), is the first, or more probably the second dorsal; but in this case this nerve-root was not implicated, as the intrinsic muscles of the hand were not morbidly affected. Dr. Hughlings Jackson could not explain the pupillary condition; the patient's knee-jerks were present, and he had no tabetic symptoms, unless the left pupillary condition be reckoned as one. Nor could he explain the sweating of the left half of the face, except by supposing that the vaso-motor fibres in the cervical sympathetic arose from higher anterior roots than those supplying the iris.—Dr. S. MACKENZIE observed that he had seen about eight patients suffering with unilateral paralysis of the tongue, soft palate, and vocal cord, and they were of great interest on both anatomical and clinical grounds. The late Dr. Lockhart Clarke had shown the close anatomical union between the nuclei of the hypoglossal and spinal accessory nerves in the medulla, and Dr. Hughlings Jackson had been the first to turn these anatomical investigations to account in elucidating cases of this group. These cases seemed to demonstrate that the palate (levator palati) was innervated by the spinal accessory, and thus a very localised lesion in or outside the medulla explained the simultaneous paralysis of tongue, soft palate, and vocal cord. His own experience confirmed that of the President, that the palate escaped in pure cases of paralysis of the seventh nerve. In two cases he had recently exhibited at the Clinical Society there was also paralysis of the sterno-mastoid and trapezius, indicating that the spinal portion of the spinal accessory nerve was involved. In one of the cases, which, like the President's, was certainly syphilitic, there was no evidence as to whether the paralysis of the sterno-mastoid and trapezius came on at the same time as the paralysis of the tongue, palate, and cord; and, as there was also paralysis of the cilio-spinal fibres on the same side, which arise in the same part of the cord, it seemed probable that the internal and external branches of the spinal accessory nerve were affected by two distinct lesions. But in the second case, the paralysis of the tongue, palate, and cord came on coincidently with the paralysis of the sterno-mastoid and trapezius; and he (Dr. Mackenzie) would like to ask the President what explanation he would afford of such a case, particularly whether he thought a bulbar lesion would account for it. This, of course, would necessitate a close direct anatomical association of the two branches, notwithstanding their apparent difference in origin. He further remarked that in these cases the tongue, as a whole, was scarcely at all deflected to the paralysed side, but the raphe of the tongue was markedly curved, showing that the lateral protrusion of the tongue to the paralysed side in hemiplegia is probably due to other influences than that of the hypoglossal. He further asked the President how he explained in his case the anæsthesia of the shoulder, in the patient exhibited, being on the same side as the muscular paralysis.—The PRESIDENT replied that the disease did not appear to be in the cord itself. He could not explain the anæsthesia.

Dr. ARTHUR W. EDIS read a paper on the Treatment of Obscure Forms of Metrorrhagia. He urged the importance of regarding hæmorrhage merely as a symptom of some constitutional or local disorder, and not as a disease or entity *per se*. It was a conservative effort of nature in many instances to lessen the arterial tension and prevent the occurrence of more serious internal hæmorrhages. A correct diagnosis was the first and most important element of successful treatment, for until the former be known the latter is mere guess-work, and we are as liable to do harm as good in attempting to repress the hæmorrhage. The principle of diagnosis by exclusion was one which approved itself to many—determining, in fact, to what cause the hæmorrhage was not due. This could only be done by knowing beforehand what were the most likely causes of severe hæmorrhage—the *possibilities* so to speak, and then eliminating one after the other until we have left only two or more *probabilities*. Before concentrating attention upon the probable local disorder, the possibility of some complicating constitutional condition, whether cardiac, renal, or hepatic, should always be considered. A clear and concise history of the attack was of great importance in attempting to arrive at a correct diagnosis. Then, again, the colour and consistence of the discharge should be noted: whether bright or dark, fluid or clotted, recent or disintegrated. The duration of the flow, interval between the losses, influence upon the general health, and other similar considerations, should not be passed over. Unsuspected miscarriages and incomplete abortions proved a not inconsiderable percentage of these obscure cases. Some of the most difficult cases to diagnose occurred at or about the so-called climacteric period. Exploration of the interior of the uterus, either by dilating or incising the cervix, should always be resorted to where no sufficient outside cause for the hæmorrhage could be detected. Cases illustrating the difficulty of forming a correct diagnosis were given, and the lines of treatment sketched out. An interesting discussion followed.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Sanitary State of London Poor Districts.

A MEETING of this Society was held on Friday, March 19th, Dr. Corfield presiding.

Dr. LOUIS PARKES read a paper on the Sanitary Condition of Poor Districts in the Metropolis, with especial reference to their Watercloset Accommodation. In introducing his subject, the author brought the following questions forward as being some on which it was very desirable to get an expression of opinion from members of the Society, as a body entrusted with the care of the public health of the metropolis:—1. Is it desirable that the waterclosets of poor-class houses should be flushed by hand with pails of water, or should they be supplied with water from a cistern? 2. Is the law, as it now stands, sufficient to enable a sanitary authority to enforce a supply of water by cistern to a closet which is without one, in all cases and under every kind of circumstance? and is it obligatory on an authority to undertake this duty whenever the fact of a closet being without a water-supply is brought to its notice? 3. If the law is insufficient or too undecided in its terms as regards the powers of the sanitary authority in this respect, or its obligation to enforce the powers with which it is entrusted, what alteration is it desirable to introduce in any fresh legislation on the subject? And with this may be included the consideration of what further powers with regard to watercloset accommodation it is desirable to furnish a sanitary authority with. The danger arising from the situation of closets in underground cellars in tenement houses was alluded to. These dangers were shown to be unnecessarily aggravated in many cases by the closet being without a water-supply, and used—as the only convenience—by all the lodgers in the house, who might be thirty in number, in some of the poorest quarters. A far better arrangement is for the closet to be in the back yard, outside of and away from the house. The "long hopper" closet is the one almost invariably found in use, and it is one of the worst forms; it soon becomes soiled and corroded, and is incapable of being properly flushed. The best form of closet for use by poor people is the "short hopper" of glazed stoneware, with vertical back and sloping front, and with syphon trap below. This form is easily flushed out and kept clean, when supplied with water by a two-gallon waste-preventing cistern. But such waste-preventing cisterns as are supplied to poor-class houses are almost invariably found to be out of order, the ball valve being defective or the outlet valve leaking. The syphon action water-waste-preventer is preferable as being more certain in action, but it is more expensive, and the chains, ball-cocks, and other detachable metallic parts in all these cisterns attract the cupidity of the destructive class of

tenants in the poorest quarters, and consequently disappear. Flushing by hand with pails may be made to answer (1) if there is a water-tap in close proximity to the closet in the yard; (2) if the duty of flushing is entrusted to some one person in the house who shall become responsible for its proper performance; and (3) if the sanitary inspector can visit at frequent intervals to see that the flushing is not neglected. In courts and alleys which are not thoroughfares, the author advocated the use of trough-closets in the court, with separate locked compartments or cubicles for the use of each house. These closets can be effectually flushed by a Field's automatic syphon flush-tank, placed in a separate locked compartment, accessible only to the sanitary inspector. These trough-closets have been found in Liverpool and elsewhere to answer extremely well in the case of courts and blind alleys occupied by the lowest and most degraded classes. As to the sufficiency of the law, Section 81 of the Metropolis Local Management Act of 1855 gives power to a sanitary authority to enforce a suitable water-supply and water-supply apparatus to a closet without one, even where no nuisance, as the result of the absence of such fittings, can be proved to exist, and this power relates to houses built before as well as after the Act was passed. The case of Tinkler *v.* Wandsworth District Board of Works, although often cited, has no bearing on this question except indirectly, as here it was a question not of waterclosets but of privies and cesspits unconnected with the public sewer, in which water could not properly be used. It was, however, decided in this case that the local board had power to convert one privy into one watercloset with water-supply apparatus, but could not make a general order to convert any number of privies in their district into waterclosets without exercising discretion in each particular case. In the case of the Vestry of St. Luke's *v.* Thomas Lewis, it was a question of water-closets without water-supply. This case was tried in 1862 in the Court of Queen's Bench. The magistrate's decision adverse to the plaintiffs was reversed, and Lord Chief Justice Cockburn gave judgment to the effect that the vestry had power to order a water-supply to a closet without one. However, it still remains to be decided whether a local authority has power to make a general order enforcing water-supply to all or any number of closets in its district, without exercising discretion in each particular case. The Public Health Act of 1875 empowers a local authority to insist on a "sufficient water-closet" being provided, but there is no clause which deals with the enforcement of a water-supply. "Sufficient" was no doubt intended to include a water-supply. The author pointed out that by Section 7 of the Housing of the Working Classes Act of last session, sanitary authorities in the metropolis now lie under a statutory obligation to enforce in sanitary matters all the powers with which they are provided. It did not appear to be proved that any alteration in the law as regards water-supply to closets was either necessary or desirable, although enlargement of powers for the purpose of providing trough-closets in courts seemed to be needed.—In the discussion which followed, the President, Drs. Seaton, Pringle, Gwynn, Iliff, Dudfield, West, and Messrs. Furnivall, Bernays, Hartt, Cassal, Lovett, and Shirley Murphy took part.

ACADEMY OF MEDICINE IN IRELAND.

Keeping Perforation of the Membrana Tympani open.—The Radical Cure of Hydrocele.—Therapeutic Uses of the Digestive Ferments.—Fetid Expectoration from the Lung.

A MEETING of the Surgical Section was held on Jan. 22nd.

Dr. M'KEOWN (Belfast) described a method of making an Artificial Perforation of the Membrana Tympani which would remain open for a period varying from two weeks to two months. He made a triangular flap of the membrane, commonly selecting either that part in front of, or that behind, the handle of the malleus. He used a speculum, and illuminated the membrane by the frontal mirror. He then introduced the knife—a very fine straight knife with thin handle,—punctured the membrane in front of, or behind the top of, the handle of the malleus, cut upwards as far as he could, then made a second incision, beginning below, either at the anterior or posterior part of the membrane, as the case might be, and in a horizontal line with the lower end of the first incision, and cut upward till the two incisions joined. The flap thus formed, unless in case of very thickened membrane, fell down, or might be turned down with a fine probe, and commonly remained in position, adhering to the membrane below by blood exuded from the cut surface. He had operated on a considerable number of cases—some of long standing,—and he gave particulars of some of the most interesting. The ordinary incisions hitherto practised, except to discharge products of inflammation, were of no therapeutic use whatever. The operation proposed was not for the purpose of making an artificial way for the waves of sound, but to give rest to the ear for a long period, and to induce a nervous and vascular equilibrium favourable to the absorption of deposits and restoration of function. Most troublesome obstructions of Eustachian tubes of long standing had given way to this treatment alone. As to relief of tension in old cases, a simple incision closing in a day or two could do no good, but an opening for a period of from two weeks to two months might do a great deal. Time was the very essence of the question from a therapeutic point of view. He illustrated the use of the method in diagnosis, and also in opening a way for efficient treatment of some cases of hypertrophic change of the lining of the middle ear. So far as he could follow his cases, he found none were made worse, some were not benefited, but the majority were more or less relieved, some to a remarkable extent.

Mr. M'ARDLE read a paper on the Radical Cure of Hydrocele. After describing the methods of Volkmann, Julliard, and Bergmann, he read the notes of three cases illustrating the method of incision. He brought forward specimens to show the ease with which the tunica vaginalis could be removed in the operation for excision. He then compared the methods of injection and dissection chiefly as regards—1st. The relative difficulties of the operative procedures. 2nd. The dangers attending each. 3rd. The length of time required for cure. 4th. The chances of return after each method. In reference to the third point he called attention to the following as the dates of healing. After

Injection.		Incision.		Excision.	
Billroth, 9th	...	Volkmann, 8–10th	...	Julliard,	10th
Stoltz, 9–10th	...	Küster,	14th	... Bergmann,	11–12th
Weiss, 8–9th	...	Lister,	17th		

The chances of recurrence in various methods he stated as follows:—Injection: 315 cases; 41 recurrences. Incision: 238 cases; 5 recurrences. Excision: 72 cases; no recurrences. The percentage of recurrences after injection of different substances seemed to be very much the same: after iodine, 15 per cent.; chloral hydrate, 13 per cent.; perchloride of iron, 11 per cent.; carbolic acid, 10 per cent.; and chloroform, 10 per cent. Mr. M'Ardle recommended the dissection method in: (1) Multilocular hydrocele; (2) hydrocele connected with tubercular testis; (3) cases complicated by mucoid transformation of the cellular tissue of the scrotum; (4) cases where injection of ordinary hydrocele failed more than once; and (5) those cases of hydrocele in which the tunica vaginalis becomes greatly thickened, coated with chalky deposit, or filled with foreign bodies.—Mr. STOKES said he could not, in his own practice, recall a single instance of failure in the radical cure of hydrocele by what Mr. M'Ardle termed the old method of injection, although some of his cases had been injected more than once. In none of the cases was there any serious trouble, such as fever, sloughing of the scrotum, erysipelas, &c.; therefore, he was not disposed to alter his method of treatment for one more hazardous. He had seen Volkmann's treatment by incision, and one of the most important points connected with it had not been mentioned—namely, that having incised the tunica vaginalis, and attached the edges with great accuracy to the edges of the skin by continuous sutures, a series of deep sutures were applied to keep the surfaces in apposition. He had seen serious consequences follow the operation—for instance, retention of urine and fever.—Mr. BARTON said the question was one of choice between the operations which admittedly had certain risks and the well-established procedure which was without any serious risk. He was therefore gratified that Mr. M'Ardle had recommended those operations for the treatment of hydrocele only in difficult cases which had resisted injection.—Mr. CROLY had never known of a single case of hydrocele that resisted the ordinary treatment. Where failure occurred with others, he had no doubt it was due to using iodine in too diluted a form. He never thought of using a solution of iodine and water, but threw in a few drops of undiluted

tincture of iodine, which invariably effected a cure. What he advised was to dip the probe into a little bit of lard and then wipe with red precipitate. A few grains of red precipitate introduced into the tunica vaginalis, or a few drops of tincture of iodine, would effect a cure in ninety-nine cases out of a hundred. By this means he would leave nothing to be cut out. He never saw gangrene, erysipelas, or anything bad follow the operation; or, if there did, it was the fault, not of the operation, but of the operator.

At a meeting of the Medical Section on January 29th, Dr. PURSER read a paper on the Therapeutic Uses of the Digestive Ferments, in which he condemned as useless and irrational the internal administration of these substances, and argued that their true use in medicine was limited to the preparation of artificially digested food.—Dr. HENRY KENNEDY took exception to Dr. Purser's observations about the effect of pepsine, of which he had had favourable expeence himself in children, with whom imagination could not be said to operate. How pepsine acted he was unable to explain. Some preparations of pepsine with glycerine were calculated to develop an unpleasant smell, which made it disagree.—Dr. WALTER G. SMITH regarded Dr. Purser's conclusions as founded on incontrovertible data. It was high time to protest against the illogical and irrational mode of using so-called aids to digestion.—Dr. J. W. MOORE said that rectal alimentation was one of the principal uses of digestive agents, from the addition of which to nutritive enemata he had seen good results.—Dr. ATTHILL said he was sure Dr. Purser's remarks were based on scientific principles, but possibly some of his deductions were not strictly correct; because experiments carried on outside the body could not be identical with experiments inside. While sensible that there was a vast amount of humbug in the sale of digestive ferments, he did not agree with Dr. Purser that those ferments were absolutely useless, having himself prescribed pepsine with good results, especially in the case of children and delicate women. In artificial feeding per ano the peptonised food was of the greatest importance.—Dr. PURSER replied that he was prepared for the protest made as to the use of pepsine, and had anticipated the objection in his paper. As to the effect of medicine on children and delicate women, he did not say the effect was produced through the imagination; but he did not know anybody who gave pepsine and nothing else. The diet was always regulated to make it more easily digestive, and pepsine was prescribed with acid or aromatic water, and aromatic water would often cure gripes in children. To say the thing was different inside the body and outside the body showed an erroneous conception of digestion, which did not take place inside but outside the body. The mucous membrane of the stomach was just as much outside the body as the palm of the hand. The preparations for rectal alimentation were of some value.

Dr. H. KENNEDY detailed two instances, both in young females, where a very profuse expectoration, attended by a most offensive odour, occurred. The fetor was so great as to diffuse itself through a large ward, like what occurs in gangrene of the lung. The physical signs were in each case confined to one lung, and were what is now known as chronic strumous pneumonia. In each case there were slight signs of hectic, with the nails curved; whilst menstruation was irregular. Under the use of a combination of powdered uva ursi and charcoal the patients improved much in their general health, and the fetor quite ceased at the end of ten days, and in about a month each patient left the hospital to look for places as servants. No local treatment in the way of inhalation was used.—Dr. HAYES instanced the case of a woman in Dr. Steevens's Hospital whom he had seen at the request of a colleague; the patient was the subject of a fetid bronchitis. He suggested an inhalation consisting of a combination of creasote, carbolic acid, iodine, and spirit, and the fetor disappeared entirely in a few days.

CHESTER MEDICAL SOCIETY.

A MEETING of this Society was held on Friday, February 5th, Mr. James Taylor, F.R.C.S., President, in the chair.

Small Mitral Valve.—Mr. H. DOBIE, on behalf of Mr. George Harrison, exhibited a heart, the mitral orifice of which barely admitted an ordinary black lead pencil. The other valves were healthy, but there was fatty degeneration of the organ. The patient was a woman of forty years of age, giving no history of rheumatic fever. Her pulse averaged forty-eight beats per minute, but no murmur was discoverable during the ten weeks she was in hospital.

Syphilis.—Dr. WEAVER (Frodsham) read notes of a case of Syphilis which he had observed through its various phases for two years. One marked symptom had been severe neuralgia in both temples coincident with periostitis of the vertex excited by a blow. Dr. Weaver asked what remedy had in the experience of members been found most effectual for this bi-temporal neuralgia, when gelsemium, bromide of potassium, and iodide of potassium, together with a long mercurial course, proved ineffectual.—Dr. DOBIE said he had recently seen a case in which gelsemium had failed yield at once to a course of perchloride of mercury with iodide of potassium. These he thought the best remedies for the neuralgia of syphilis.—Surgeon-Major TOMLINSON thought that when these means failed the hypodermic injection of morphia should be had recourse to.

Mr. ALEXANDER BARRON of Liverpool (visitor) exhibited a Microscopic Section of a Primary Desquamating Syphilitic Papule, showing lymphatic spaces containing a hyaline coagulum, in which multitudes of micrococci were embedded. He explained the staining reaction of the organism and the difficulties in its cultivation. He had found it in glands secondarily affected and in tertiary lesions of recent development. He thought it could always be found in syphilitic lesions if looked for at the proper time, and that, considered in the light of our knowledge of the pathology of tubercle and other allied diseases, the probability of its being the cause of the disease was very great.—Mr. STOLTERFOTH thought the detection of the bacillus might often form a valuable aid in the diagnosis of syphilis.

Dr. WATERS read a paper on the Communicability of Typhoid Fever, the discussion upon which was postponed.

At the meeting on March 5th, Mr. MILLER showed a specimen removed from the body of a labouring man, aged fifty-one, who had been under Dr. Stolterfoth's care in the Chester Infirmary. A firm pulsating tumour, with a distinct murmur to be detected by auscultation over it, was discovered situated behind the right sterno-clavicular articulation. A few hours before death great dyspnœa came on, and expectoration of mucus tinged with blood. The post-mortem examination disclosed a sac, bounded apparently by the surrounding tissues, without arterial coats, containing broken-down coagulum. This sac communicated on the one hand with the right carotid artery, which was atheromatous, by a minute aperture, and on the other with the œsophagus and the trachea, the former by a very free opening.

Mr. TAYLOR showed an Ovarian Cyst recently removed by him with success in the Chester Infirmary. Mr. Taylor also exhibited a piece of intestine removed (post mortem) from a case of obstruction of the bowels. This he handed over to the Pathological Committee for examination.

Measles.—Dr. HAINING read a note of five cases of measles which he had had the opportunity of personally observing closely, proving that measles is infectious in the stage of catarrh, and pointing to nine days as about the average length of the incubation stage.

Dr. DOBIE showed a beautifully designed and coloured Temperature and Pulse Chart of a case of Typhoid Fever, observations having been recorded several times each day by the husband of the patient.

Hæmophilia.—Mr. Moreton of Tarvin read a paper on Hæmophilia, giving details of a series of cases in one family of which he had had the care. The mother appeared to be the source of the mischief, but was not herself a "bleeder" and showed no tendency to post-partum hæmorrhage at any of her confinements. The eldest son was not a bleeder, but suffered when young from most obstinate dyspepsia, at one time weighing only 63 lb., while he was 5 ft. 9 in. in height. He is now alive and in good health in Virginia. The second boy, after frequent attacks of bleeding, died at the age of ten from epistaxis. The third, fourth, and fifth boys died between the ages of three and eight from hæmorrhage. The sixth died at eighteen months from bleeding from the mouth, without apparent injury. None of the girls were "bleeders." The mother had had four abortions, and in every case the fœtus was a male. Mr. Moreton frequently examined the blood of these patients, and always found it normal as regards coagulation and microscopic appearance.

He thought a peculiarity in the structure of the capillaries would best explain the condition, but he believed it was open to anyone to start a new theory as to the real nature of the conditions which result in the disease.

A discussion followed, in which several members gave their experience of more isolated cases.

MIDLAND MEDICAL SOCIETY.

A MEETING of the above Society was held on Wednesday, March 3rd, Dr. J. Holmes Joy, President, in the chair.

Lead Tremor.—Dr. SUCKLING showed a man, a lapidary, who had suffered for years at times from lead colic. A week before coming to the hospital he noticed trembling of the hands, which came on somewhat suddenly and obliged him to give up work. There was marked rhythmical tremor of the hands and forearms on extension, ceasing during rest; also, wasting of the thenar muscles and some weakness of the extensors of the wrist. There was a well-marked blue line on the gums.

Brass-founder's Ague.—Dr. SUCKLING showed a man who had worked in brass for twenty-six years. The casting shop was immediately under the room in which the man worked, and whenever any casting was done the dense fumes given off always made him ill, causing shivering and sweating, very frequently also vomiting, pains about the chest and limbs, and bronchial catarrh. The man had a well-marked green line on the teeth close to the gums, and his hair was of a greenish tint. Dr. Suckling met with the disease very frequently among the out-patients at the Queen's Hospital, and he found that iodide of potassium gave relief.

Amblyopia and Monoplegia.—Dr. SUCKLING showed a child with Paralysis of the Right Hand and Amblyopia. Several months previously it had been seized with vomiting followed by Jacksonian epilepsy, the convulsions always beginning in the right hand and then passing on to the right side of the face, then to the right leg. Three months ago the convulsions ceased to occur, but the right upper extremity remained paralysed and had become rigid. Latterly the child had lost its sight, running into objects and not recognising its parents. The pupils responded normally, and there was no change in either fundus; there was a marked history of phthisis on the mother's side. Dr. Suckling considered that the monoplegia indicated mischief in the convolutions around the left fissure of Rolando, and that the amblyopia was due to extension backwards and implication of the angular gyrus, and possibly also of the outer surface of the occipital lobe.

Aortic Aneurysm.—Dr. CARTER showed a specimen of Aneurysm of the Ascending Aorta, taken from a miner aged thirty-six. There was no previous history of rheumatism, syphilis, or chronic alcoholism, and the lesion was attributed to chronic aortitis occurring in connexion with over-strain of the heart in the course of his work. The tumour pointed externally to the left of the sternum, between the second and fourth ribs. In the early stage great benefit was derived from Tufnell's plan of treatment. Later on, when all other treatment had failed, and the aneurysm threatened to burst externally, galvano-puncture was performed, and for a month after this there was great improvement; but the symptoms returned, and finally death took place from hæmoptysis, due to encroachment of the aneurysm on the tissue of the left lung. The total duration of the illness was about sixteen months.

Spinal Curvature.—Mr. WILLIAM THOMAS exhibited two patients suffering from Angular Curvature of the Spine, each of them wearing an inexpensive jacket which he desired to bring before the members of the Society as a useful method of treatment. The principal feature of the jacket was a support of soft Swedish iron, which could easily be adapted to the changing shape of the spine, and could readily be arranged to support the head. This was applied closely to the spine, and, being sewn into a jacket of jean, was kept in position by lacing up the front. He claimed for it greater facility of application, more ease to the patient, less cost, and better results than from treatment by the plaster jacket.

Mr. JORDAN LLOYD showed a Hernial Sac that he had removed from a child, and another from a man aged twenty-nine; this latter contained a quantity of omentum. The result in both cases had so far been satisfactory.

Dr. MALINS showed a dumb-bell-shaped Ovarian Cyst containing a number of papillary growths.

Mr. HASLAM showed a Ruptured Liver and Right Kidney due to a kick on the abdomen from a horse. The patient, a man aged twenty-nine, had no symptoms indicative of a serious lesion until after five days; he was then seized with shock and collapse, his abdomen became distended, and there was suppression of urine; he died after twenty hours. At the post-mortem examination about half a pint of blood was found in the peritoneal cavity; this probably came from the damaged under-surface of the liver.

Mr. LAWSON TAIT read a paper on four cases of Chronic Inflammatory Disease of the Uterine Appendages.

Reviews and Notices of Books.

The Causes and Prevention of Blindness. By Dr. FUCHS, Professor of Ophthalmology in the University of Liège. Translated by Dr. R. E. DUDGEON. Pp. 247. London: Baillière, Tindall, and Cox. 1885.

THIS work is the outcome of a prize offered by the Society for the Prevention of Blindness in London at the Fourth International Congress for Hygiene, which met in September, 1882, at Geneva. The volume is divided into nine parts, as follows: eye diseases of hereditary origin, eye diseases of childhood, eye diseases incidental to the educational period, eye diseases consequent on general diseases, infectious eye diseases, influence of occupation on eye diseases, influence of social conditions on eye disease, influence of climate and race on eye disease, and, lastly, treatment of eye diseases. Perhaps the most interesting of these divisions is that which relates to the eye diseases incident to the educational period, and which of course treats at length of the development of myopia. Many points are here discussed, and many rules laid down that are wholly ignored in English schools. To mention only a few. How rare is it to find an architect who, in building a school, pays the least attention to the light. Yet this has been the subject of careful research by many German writers. Almost all are agreed that the windows should look towards the east and the south-east. There are advantages, however, about the south which should not be overlooked. Rooms so lighted are much more cheerful and wholesome; they are warmer, and the excess of light in summer, which is hardly to be dreaded in this climate, can easily be guarded against by blinds. The position of the windows should not be overlooked. Light should, if possible, be admitted chiefly or altogether from the left, and skylights always afford excellent illumination. The proportion of window superficies to floor superficies is given by the best authorities at from 1 : 8·6 to 1 : 1. In Brunswick an inspection of the schools showed that three-quarters of them were insufficiently lighted. In the evening, when artificial light is required, there should be one burner to every four scholars. We should like to know the proportion in most private and in several public schools; we fancy one burner to ten scholars would be nearer the mark. In Liège several of the schools are lighted by electricity. When will this be carried out at Eton, Harrow, Rugby, Westminster, Winchester, and Shrewsbury? Then the subject of the seats and desks is of the greatest possible importance. Dr. Fuchs says: "The scholar sits in a proper manner when the upper part of his body is straight, so that pelvis and shoulders are parallel to the border of the desk, and the head is erect or slightly bent forwards. The feet should rest upon the floor, the back supported by a sacral rest. When writing, the forearms, but not the elbows also, should rest on the desk." An indispensable requisite for this posture is a properly constructed seat. In an appendix to Dr. Fuchs' work Dr. Roth gives some good illustrations of good and bad positions in writing and drawing. Great interest attaches to the questions of the character and slope of writing, and to the features of the print children have to employ. Dr. Fuchs does not

believe the German character to be so injurious to the eyes as is generally believed. In regard to age, no child under six should be admitted into school. For the lower classes the maximum for "sitting lessons" should be three and for the upper four hours. He compares the number of hours which the scholar has to give to lessons and to play between his tenth and nineteenth year in Germany, France, and England. They are as follows:—In England, working hours 16,500, play 4500; in France, work 19,000, play 1300; in Germany, work 20,000, play 650; and to this excess of work in Germany he attributes the prevalence of myopia in that country. Dr. Fuchs would cut down the time devoted to the dead languages. There is a valuable section on the purulent ophthalmia of new-born children, in which the importance of prophylaxis, both as regards mother and child, is strongly insisted on. The author approves of Credé's plan of dropping a weak solution of nitrate of silver into the eyes of the infant. The subject of trachoma, so frequent abroad, though happily rare in this country, is fully discussed. The book is well got up, and is a valuable addition to ophthalmological literature.

Clinical Lectures on the Practice of Medicine. By the late ROBERT J. GRAVES, M.D., F.R.S. In Two Vols. Vol. II. London: The New Sydenham Society.

WE have now to notice the appearance of the second volume of these Clinical Lectures, so creditable to British medicine, and so indispensable to every practitioner who would have a well-furnished mind, not to say library. Not that all Graves's theories, either of therapeutics or pathology, can be now sustained. He lived before the great revolution in practice which has resulted from a truer estimate of the part of nature and of art in the treatment of disease, though there are many indications that even in regard to the errors of the old practice he was in advance of his contemporaries. But, allowing for these, Graves must still be greatly read and respected by every intelligent practitioner. His range of practice was so wide, his attention to particular cases and details of cases was so admirable, his eye for therapeutics and the benefit of the patients was so keen, his resources and suggestions so original, and he was withal so reasonable—so physiological—in his pathology, that he will always stand out as a model physician. No disease was too vulgar for his study, no remedy too humble for him to consider. He treats of headache, of diarrhœa and constipation with as much orginality and interest as he does of exophthalmic goitre. His classical lectures on these subjects will be found in this volume, for which we have to thank the New Sydenham Society.

Essentials of Histology, for the use of Students. By E. A. SCHAFER, Jodrell Professor of Physiology in University College, London. Pp. 244; 281 Woodcuts. London: Longmans. 1885.

THIS work is divided into forty-two sections, chapters, or, as Mr. Schäfer prefers to call them, lessons. Each lesson, as the size of the book renders evident, is short, and is illustrated by several woodcuts; many of the woodcuts are taken from the histological portion of the last edition of "Quain's Anatomy," which Mr. Schäfer has had so large a share in editing; others come from the author's own stores, or from some well-known text-book. To show the method pursued by the author we open the book at random at the twentieth lesson. This treats of the structure of the larger blood-vessels. It commences with directions for five experiments, which the student should make for himself—viz., sections and staining of a medium-sized peripheral artery and vein; the demonstration of the endothelium; the demonstration of the other tissues by teasing and staining; the comparison of the structure of a large with that of a small artery and the structure of a vein; then follows a description of the structure of vessels, illustrated with seven woodcuts. Mr. Schäfer has had so much experience in teaching, and is recognised as so good a teacher, that it is unnecessary for us to say a word in regard to the letterpress. It is less full than Dr. Klein's admirable little volume on Histology, but it contains all that a student of histology, physiology, or pathology needs to know.

The Two Foundations of St. Bartholomew's Hospital: A.D. 1123 and A.D. 1546. By W. MORRANT BAKER, F.R.C.S., Surgeon to the Hospital. London: Smith, Elder, and Co. 1885.

THIS little book contains the substance of an introductory address delivered before the Abernethian Society at the first meeting of the session 1885-6. Specially interesting as it must of course be to all who can boast that they are *alumni* "of the oldest hospital in London," it possesses also general interest for all who are curious in the antiquarian history of our great medical charities. Interesting quotations are given, in the quaint old spelling and phraseology of the period, from a manuscript in the British Museum devoted almost entirely to the life and acts of the founder (more than seven centuries ago) of St. Bartholomew's Hospital—one Rahere, or more correctly Rayer. The author remarks that Rahere is often referred to as the King's minstrel, or even his jester, but that there is no good reason for believing that he ever held any official position in either capacity. Be that, however, as it may, he seems, in order to accomplish his good object, to have been like one of Shakespeare's immortal jesters, "wise enough to play the fool." In the words of the manuscript, "he made and feigned himself unwise, for he was so coacted and outward pretended the cheer of an idiot, and began a little while to hide the secretness of his soul; and the more secretly he wrought, the more wisely he did his work." Socialists, and other too perfervid and reckless agitators, may congratulate themselves that a hospital is more of a sanctuary than it was in the days of Richard II., when Wat Tyler, being wounded by the mayor, William Walworth, and subsequently conveyed "into the hospitall of Saint Bartilmewe," the mayor "went straight thither, and made him to bee carried into Smithfield, and there caused him to bee beheaded, his head to bee set on a pole, and borne before him to the King, then remayning in the field; and the King caused it to be borne neere unto him, therewith to abash the Commons, greatly thanking the Mayor for that acte." It is interesting to note that at the time of the second foundation the annual income of the hospital was about £800; in 1837, £30,000; and last year £60,000. The frontispiece of this interesting little work—which, by the way, is tastefully got up and clearly printed—is a reproduction of a portion of an engraving contained in the *Vetusta Monumenta* of the Society of Antiquaries.

Chemistry, General, Medical, and Pharmaceutical; including the Chemistry of the British Pharmacopœia. By JOHN ATTFIELD, F.R.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, &c. Eleventh Edition. Van Voorst. 1885.

PROFESSOR ATTFIELD'S manual is so well known that an eleventh edition would scarcely call for notice if it were not for one important improvement—viz., a well written and remarkably lucid section on systematic organic chemistry, in which the modern classification is explained and all the chief groups discussed in some detail. So far is this from interfering with the practical character of the book, that it renders the experimental study very much easier. Without the classification derived from theory organic chemistry is a hopeless labyrinth of isolated facts, for the remembrance of which no human memory would suffice. Professor Attfield adopts an arrangement which is perhaps

on the whole, the most convenient—taking first hydrocarbons and their derivatives, then the acid compounds, and so on. Few important groups are omitted in the classification, but it might have been wise to have given a general description of the amides and osmic acids, most of which are, however, described in appropriate places. On the whole, we are inclined to think, from its clearness, practical character, comprehensiveness, and enormous index, that no treatise on chemistry at present extant is likely to be as generally useful to medical men and medical students as that of Professor Attfield. To pharmaceutists it is of course essential.

New Inventions.

THE LENIMOR: A POCKET INHALER.

WE have received a small instrument, in shape resembling an enlarged cigarette-holder, about three inches long, which has been invented and patented as an inhaler. It is made of ivory, is very simple in its construction, and can be carried in the waistcoat pocket and made available for use at any time. All that is needed for the purpose in view is to place a pledget of wool soaked in the medicament—e.g., eucalyptol or turpentine—within the tube, the free extremity of which is then closed by a cap. Air is admitted by two small apertures below the cap, and the aperture at the mouthpiece is also of small size. By using the instrument in the manner of a pipe, the patient inhales the vapour quite as effectually as if he were wearing the less sightly oral inhaler. The inventor, who is a sufferer from lung disease himself, has found relief from its use; and we may add that we have tested it upon a patient, who stated that it was as effectual as the ordinary inhaler. We question whether in most cases the vapour has more than a local action upon the pharynx and upper larynx, but at any rate the idea is ingenious and the instrument worthy of trial.

DR. SPENCER'S IMPROVED BINAURAL STETHOSCOPE.

THE features peculiar to this stethoscope are the communication between the metal tubes or ear-pieces, which is made by means of a short transverse junction that serves also as a hinge; so that when in use the two curved ear-tubes cross one another, a red rubber band below the hinge serving to maintain the requisite degree of pressure to keep the stethoscope in position. The two flexible tubes, to which either a single chest-piece or two separate chest-pieces can be attached, if, as in the latter case, it is intended to convert the instrument into a differential stethoscope, are so constructed as to be detachable from the metal tubes, thus enabling the physician to carry the instrument with great convenience. We have had frequent opportunity for testing the stethoscope in consultation, and can assert that its conducting powers are very good. It is equally excellent whether used as a single or differential stethoscope. How far the open junction between the two tubes aids in reinforcing the sound we can hardly say, but at any rate the instrument is ingeniously devised and admirably constructed. It is made by Ferris and Company, Bristol.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.

THE annual address by the President, Dr. Norman Kerr, delivered on Tuesday last, was on the Legislation needed for the Habitual Drunkard. The President called attention to the contrast between the United States and England. In the former country the poorest inebriate could be treated at a State-supported home for inebriates for six months, while in the latter there was no provision whatever, under the Habitual Drunkards Act, for the destitute or for persons of limited means. Only the well-to-do could avail themselves of the provisions of the Act. Truly, here was one law for the rich and another for the poor. Some homes had been very unsatisfactory, and confirmed, rather than cured, the inebriate habit. These injured the character of even genuine homes, of which the Dalrymple Home was the chief, it being the only licensed retreat conducted without financial benefit to the proprietary, and which published its returns in a scientific form. The Act should be improved and be made a permanent measure. As the appearance before two justices acted as a deterrent, this forbidding procedure should be abolished; and (as in the United States) a confirmed inebriate ought to be allowed to sign away his freedom and enter a retreat on a simple contract with the licensee. Any abuse of the liberty of the subject could be effectually prevented by inspection, visitation, and power of appeal by the patient. Escaped patients ought to be taken back direct to the home without the punitive ordeal of having to appear before a justice, as at present. There should also be provision made, at the public cost, for the poor and for such as could afford to contribute only a little towards their sustenance and care. Magistrates, too, ought to have the power to compel the entrance of certain well-defined cases of inebriety into a retreat.

Dr. J. B. HURRY (Reading) read a paper on Uncontrollable Inebriety.

ANTIPYRIN IN PERNICIOUS FORMS OF MALARIAL FEVERS.

To the Editor of THE LANCET.

SIR,—Whilst in charge of the Police Hospital of Bombay during my tenure of office as Acting Police Surgeon I had considerable opportunities of testing the effects of different kinds of treatment in malarial fevers, of a remitting as well as of an intermitting type. In common with most men who have had much experience of these fevers, I met many cases of a remittent type which were not amenable to the ordinary treatment, whether by quinine, arsenic, or diaphoretics with aconite. I determined to try the effect in such cases of administering antipyrin in sufficiently large and repeated doses, to ensure a reduction of the temperature to the normal standard. The result was most satisfactory, so much so that during the last five months of my tenure of office I found no case that was not amenable to this treatment. Many cases that for weeks had been quite unaffected by the ordinary remedies were instantly cured by the exhibition of antipyrin followed by quinine. The few cases in which I found the effects unsatisfactory eventually showed other complications, such as abscess of the liver or phthisis. I am of opinion that in pernicious forms of uncomplicated remittent fever we have a most valuable aid to treatment in antipyrin.

As I am not aware that this treatment has been advocated in the malarial fevers of the tropics, I write to give you the result of my experience, in the hope that it may prove of use to those who have to contend with this common and only too fatal disease.—Your obedient servant,

Sheffield, April, 1886. JOHN HOPE POTTER.

DEGREES FOR LONDON MEDICAL STUDENTS.

To the Editor of THE LANCET.

SIR,—Apropos of the letter signed "Justice" in your last issue, can you or some of your readers give any information regarding the proceedings of the Joint Commission of the two Colleges appointed to consider this question? I trust that the matter will not be shelved, but that if nothing is to be done we shall be told so without further delay; if, on the other hand, there is a prospect of the early removal of this fruitful source of heartburning amongst us, the sooner some intimation is given to that effect the better for the Colleges themselves. The season for "Brussels" is now coming round again, and many an English student may be deterred from deserting the metropolitan schools in favour of a degree-giving northern University by a timely announcement before his arrangements are made for the ensuing summer session.

I am, Sir, yours truly

April, 1886. FAIR PLAY.

believe the German character to be so injurious to the eyes as is generally believed. In regard to age, no child under six should be admitted into school. For the lower classes the maximum for "sitting lessons" should be three and for the upper four hours. He compares the number of hours which the scholar has to give to lessons and to play between his tenth and nineteenth year in Germany, France, and England. They are as follows:—In England, working hours 16,500, play 4500; in France, work 19,000, play 1300; in Germany, work 20,000, play 650; and to this excess of work in Germany he attributes the prevalence of myopia in that country. Dr. Fuchs would cut down the time devoted to the dead languages. There is a valuable section on the purulent ophthalmia of new-born children, in which the importance of prophylaxis, both as regards mother and child, is strongly insisted on. The author approves of Credé's plan of dropping a weak solution of nitrate of silver into the eyes of the infant. The subject of trachoma, so frequent abroad, though happily rare in this country, is fully discussed. The book is well got up, and is a valuable addition to ophthalmological literature.

Clinical Lectures on the Practice of Medicine. By the late ROBERT J. GRAVES, M.D., F.R.S. In Two Vols. Vol. II. London: The New Sydenham Society.

WE have now to notice the appearance of the second volume of these Clinical Lectures, so creditable to British medicine, and so indispensable to every practitioner who would have a well-furnished mind, not to say library. Not that all Graves's theories, either of therapeutics or pathology, can be now sustained. He lived before the great revolution in practice which has resulted from a truer estimate of the part of nature and of art in the treatment of disease, though there are many indications that even in regard to the errors of the old practice he was in advance of his contemporaries. But, allowing for these, Graves must still be greatly read and respected by every intelligent practitioner. His range of practice was so wide, his attention to particular cases and details of cases was so admirable, his eye for therapeutics and the benefit of the patients was so keen, his resources and suggestions so original, and he was withal so reasonable—so physiological—in his pathology, that he will always stand out as a model physician. No disease was too vulgar for his study, no remedy too humble for him to consider. He treats of headache, of diarrhœa and constipation with as much orginality and interest as he does of exophthalmic goitre. His classical lectures on these subjects will be found in this volume, for which we have to thank the New Sydenham Society.

Essentials of Histology, for the use of Students. By E. A. SCHAFER, Jodrell Professor of Physiology in University College, London. Pp. 244; 281 Woodcuts. London: Longmans. 1885.

THIS work is divided into forty-two sections, chapters, or, as Mr. Schäfer prefers to call them, lessons. Each lesson, as the size of the book renders evident, is short, and is illustrated by several woodcuts; many of the woodcuts are taken from the histological portion of the last edition of "Quain's Anatomy," which Mr. Schäfer has had so large a share in editing; others come from the author's own stores, or from some well-known text-book. To show the method pursued by the author we open the book at random at the twentieth lesson. This treats of the structure of the larger blood-vessels. It commences with directions for five experiments, which the student should make for himself—viz., sections and staining of a medium-sized peripheral artery and vein; the demonstration of the endothelium; the demonstration of the other tissues by teasing and staining; the comparison of the structure of a large with that of a small artery and the structure of a vein; then follows a description of the structure of vessels, illustrated with seven woodcuts. Mr. Schäfer has had so much experience in teaching, and is recognised as so good a teacher, that it is unnecessary for us to say a word in regard to the letterpress. It is less full than Dr. Klein's admirable little volume on Histology, but it contains all that a student of histology, physiology, or pathology needs to know.

The Two Foundations of St. Bartholomew's Hospital: A.D. 1123 and A.D. 1546. By W. MORRANT BAKER, F.R.C.S., Surgeon to the Hospital. London: Smith, Elder, and Co. 1885.

THIS little book contains the substance of an introductory address delivered before the Abernethian Society at the first meeting of the session 1885-6. Specially interesting as it must of course be to all who can boast that they are *alumni* "of the oldest hospital in London," it possesses also general interest for all who are curious in the antiquarian history of our great medical charities. Interesting quotations are given, in the quaint old spelling and phraseology of the period, from a manuscript in the British Museum devoted almost entirely to the life and acts of the founder (more than seven centuries ago) of St. Bartholomew's Hospital—one Rahere, or more correctly Rayer. The author remarks that Rahere is often referred to as the King's minstrel, or even his jester, but that there is no good reason for believing that he ever held any official position in either capacity. Be that, however, as it may, he seems, in order to accomplish his good object, to have been like one of Shakespeare's immortal jesters, "wise enough to play the fool." In the words of the manuscript, "he made and feigned himself unwise, for he was so coacted and outward pretended the cheer of an idiot, and began a little while to hide the secretness of his soul; and the more secretly he wrought, the more wisely he did his work." Socialists, and other too perfervid and reckless agitators, may congratulate themselves that a hospital is more of a sanctuary than it was in the days of Richard II., when Wat Tyler, being wounded by the mayor, William Walworth, and subsequently conveyed "into the hospitall of Saint Bartilmewe," the mayor "went straight thither, and made him to bee carried into Smithfield, and there caused him to bee beheaded, his head to bee set on a pole, and borne before him to the King, then remayning in the field; and the King caused it to be borne neere unto him, therewith to abash the Commons, greatly thanking the Mayor for that acte." It is interesting to note that at the time of the second foundation the annual income of the hospital was about £800; in 1837, £30,000; and last year £60,000. The frontispiece of this interesting little work—which, by the way, is tastefully got up and clearly printed—is a reproduction of a portion of an engraving contained in the *Vetusta Monumenta* of the Society of Antiquaries.

Chemistry, General, Medical, and Pharmaceutical; including the Chemistry of the British Pharmacopœia. By JOHN ATTFIELD, F.R.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, &c. Eleventh Edition. Van Voorst. 1885.

PROFESSOR ATTFIELD'S manual is so well known that an eleventh edition would scarcely call for notice if it were not for one important improvement—viz., a well written and remarkably lucid section on systematic organic chemistry, in which the modern classification is explained and all the chief groups discussed in some detail. So far is this from interfering with the practical character of the book, that it renders the experimental study very much easier. Without the classification derived from theory organic chemistry is a hopeless labyrinth of isolated facts, for the remembrance of which no human memory would suffice. Professor Attfield adopts an arrangement which is perhaps

on the whole, the most convenient—taking first hydrocarbons and their derivatives, then the acid compounds, and so on. Few important groups are omitted in the classification, but it might have been wise to have given a general description of the amides and osmic acids, most of which are, however, described in appropriate places. On the whole, we are inclined to think, from its clearness, practical character, comprehensiveness, and enormous index, that no treatise on chemistry at present extant is likely to be as generally useful to medical men and medical students as that of Professor Attfield. To pharmaceutists it is of course essential.

New Inventions.

THE LENIMOR: A POCKET INHALER.

WE have received a small instrument, in shape resembling an enlarged cigarette-holder, about three inches long, which has been invented and patented as an inhaler. It is made of ivory, is very simple in its construction, and can be carried in the waistcoat pocket and made available for use at any time. All that is needed for the purpose in view is to place a pledget of wool soaked in the medicament—e.g., eucalyptol or turpentine—within the tube, the free extremity of which is then closed by a cap. Air is admitted by two small apertures below the cap, and the aperture at the mouthpiece is also of small size. By using the instrument in the manner of a pipe, the patient inhales the vapour quite as effectually as if he were wearing the less sightly oral inhaler. The inventor, who is a sufferer from lung disease himself, has found relief from its use; and we may add that we have tested it upon a patient, who stated that it was as effectual as the ordinary inhaler. We question whether in most cases the vapour has more than a local action upon the pharynx and upper larynx, but at any rate the idea is ingenious and the instrument worthy of trial.

DR. SPENCER'S IMPROVED BINAURAL STETHOSCOPE.

THE features peculiar to this stethoscope are the communication between the metal tubes or ear-pieces, which is made by means of a short transverse junction that serves also as a hinge; so that when in use the two curved ear-tubes cross one another, a red rubber band below the hinge serving to maintain the requisite degree of pressure to keep the stethoscope in position. The two flexible tubes, to which either a single chest-piece or two separate chest-pieces can be attached, if, as in the latter case, it is intended to convert the instrument into a differential stethoscope, are so constructed as to be detachable from the metal tubes, thus enabling the physician to carry the instrument with great convenience. We have had frequent opportunity for testing the stethoscope in consultation, and can assert that its conducting powers are very good. It is equally excellent whether used as a single or differential stethoscope. How far the open junction between the two tubes aids in reinforcing the sound we can hardly say, but at any rate the instrument is ingeniously devised and admirably constructed. It is made by Ferris and Company, Bristol.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.

THE annual address by the President, Dr. Norman Kerr, delivered on Tuesday last, was on the Legislation needed for the Habitual Drunkard. The President called attention to the contrast between the United States and England. In the former country the poorest inebriate could be treated at a State-supported home for inebriates for six months, while in the latter there was no provision whatever, under the Habitual Drunkards Act, for the destitute or for persons of limited means. Only the well-to-do could avail themselves of the provisions of the Act. Truly, here was one law for the rich and another for the poor. Some homes had been very unsatisfactory, and confirmed, rather than cured, the inebriate habit. These injured the character of even genuine homes, of which the Dalrymple Home was the chief, it being the only licensed retreat conducted without financial benefit to the proprietary, and which published its returns in a scientific form. The Act should be improved and be made a permanent measure. As the appearance before two justices acted as a deterrent, this forbidding procedure should be abolished; and (as in the United States) a confirmed inebriate ought to be allowed to sign away his freedom and enter a retreat on a simple contract with the licensee. Any abuse of the liberty of the subject could be effectually prevented by inspection, visitation, and power of appeal by the patient. Escaped patients ought to be taken back direct to the home without the punitive ordeal of having to appear before a justice, as at present. There should also be provision made, at the public cost, for the poor and for such as could afford to contribute only a little towards their sustenance and care. Magistrates, too, ought to have the power to compel the entrance of certain well-defined cases of inebriety into a retreat.

Dr. J. B. HURRY (Reading) read a paper on Uncontrollable Inebriety.

ANTIPYRIN IN PERNICIOUS FORMS OF MALARIAL FEVERS.

To the Editor of THE LANCET.

SIR,—Whilst in charge of the Police Hospital of Bombay during my tenure of office as Acting Police Surgeon I had considerable opportunities of testing the effects of different kinds of treatment in malarial fevers, of a remitting as well as of an intermitting type. In common with most men who have had much experience of these fevers, I met many cases of a remittent type which were not amenable to the ordinary treatment, whether by quinine, arsenic, or diaphoretics with aconite. I determined to try the effect in such cases of administering antipyrin in sufficiently large and repeated doses, to ensure a reduction of the temperature to the normal standard. The result was most satisfactory, so much so that during the last five months of my tenure of office I found no case that was not amenable to this treatment. Many cases that for weeks had been quite unaffected by the ordinary remedies were instantly cured by the exhibition of antipyrin followed by quinine. The few cases in which I found the effects unsatisfactory eventually showed other complications, such as abscess of the liver or phthisis. I am of opinion that in pernicious forms of uncomplicated remittent fever we have a most valuable aid to treatment in antipyrin.

As I am not aware that this treatment has been advocated in the malarial fevers of the tropics, I write to give you the result of my experience, in the hope that it may prove of use to those who have to contend with this common and only too fatal disease.—Your obedient servant,

Sheffield, April, 1886. JOHN HOPE POTTER.

DEGREES FOR LONDON MEDICAL STUDENTS.

To the Editor of THE LANCET.

SIR,—Apropos of the letter signed "Justice" in your last issue, can you or some of your readers give any information regarding the proceedings of the Joint Commission of the two Colleges appointed to consider this question? I trust that the matter will not be shelved, but that if nothing is to be done we shall be told so without further delay; if, on the other hand, there is a prospect of the early removal of this fruitful source of heartburning amongst us, the sooner some intimation is given to that effect the better for the Colleges themselves. The season for "Brussels" is now coming round again, and many an English student may be deterred from deserting the metropolitan schools in favour of a degree-giving northern University by a timely announcement before his arrangements are made for the ensuing summer session.

I am, Sir, yours truly

April, 1886. FAIR PLAY.

THE LANCET.

LONDON: SATURDAY, APRIL 10, 1886.

WE are now free to notice the new Medical Bill, which, by the courtesy of the Government, we have had before us for some weeks. Whether it is a good Bill, and what are its chances of passing, we shall leave for consideration at another stage of this article. Our first care shall be to give our readers some idea of its main provisions. We shall then be in a better position to consider its chief faults and defects.

The Bill is divided into three parts. Part I. has reference to Admission to Medical Practice and the Constitution of the General Council, and contains ten sections; Part II. has reference to Colonial and Foreign Practitioners, and includes seven sections; Part III. contains Miscellaneous Provisions, and contains seven sections. Part I. is the portion of the Bill in which members of the profession and those who contemplate entering the profession will be most interested, and it is chiefly the sections of this part of the Bill which we have to analyse.

Qualifying examinations, which after a certain day are to entitle to registration, are to be in Medicine, Surgery, and Midwifery; and a qualifying examination is to be in these three subjects, and to be provided either by the General Council or held by any of the following bodies—(*a*) Any university in the United Kingdom for the time being capable of granting such diploma or diplomas; or (*b*) any combination of two or more corporations in the same part of the United Kingdom who may agree to hold a joint examination; or (*c*) any combination of any such university as aforesaid with any other such university or universities, or of any such university or universities with a medical corporation or corporations, the bodies forming such combinations being in the same part of the United Kingdom. The standard of proficiency is to be such as to guarantee sufficient knowledge and skill for the practice of the three branches of the profession. It is to be the duty of the General Council to maintain such standard of proficiency, and for this purpose to appoint a number of inspectors to attend at all or any of the qualifying examinations held by any of the aforesaid bodies. The appointment of inspectors is to be sanctioned by the Privy Council. Inspectors appointed under the Bill are not to interfere with the conduct of any examination, but it shall be their duty to report to the Medical Council their opinion of the sufficiency or insufficiency of such examinations. The General Council is to forward a copy of such reports to the bodies which held the examination and to the Privy Council. Inspectors of examinations are to receive such remuneration as the General Council may determine, with the sanction of the Privy Council. Section 4 provides that if at any time it should appear that "the standard of proficiency required from candidates" at the qualifying examinations is insufficient, the General Council shall make a representation to that effect to the Privy Council, and the Privy Council may, by order, declare that the examinations of any such body or bodies shall not be deemed to be qualifying examinations for the purpose of registration; and the Privy Council, on the representation of the General Council, or of their own motion, shall have power at any time to revoke any such order. During the continuance of such an order the examining body in fault is not to have a representative in the General Medical Council. Section 5 provides that under the circumstances described in Section 4 the General Medical Council may hold qualifying examinations in any part or parts of the United Kingdom, providing for the appointment of examiners, the nature and conduct of the examinations, &c., provided that no candidate be excluded on the ground of adopting any particular theory of medicine, and that provision be made for the admission of women; or the General Council, subject to "the sanction and control of the Privy Council," may combine with any one or more of the bodies, and examinations so held are to be regarded as qualifying examinations. Expenses incurred by the Medical Council in the discharge of such examining duties are provided for in a subsection. Section 6 defines the privileges of a registered medical practitioner—viz., that he shall be entitled to practise Medicine, Surgery, and Midwifery in the United Kingdom and (subject to any local law) in any other part of Her Majesty's dominions, and to recover charges, expenses, fees, &c.

The constitution of the General Council is dealt with in Sections 7, 8, 9, and 10. The members of the Council are to number twenty-eight—i.e., six Crown members, four members chosen by registered practitioners, seven by the examining bodies in England, six by those in Scotland, and five by those in Ireland. Most of the bodies, including the Apothecaries of England and Ireland, are to continue to enjoy a representative all to themselves in the Medical Council; the exceptions are that the Durham and Victoria Universities are to have one between them in England; the Universities of Aberdeen and St. Andrews one between them in Scotland; the Universities of Edinburgh and Glasgow each receiving a representative. The representatives in the General Medical Council of the registered practitioners shall be also members of the Branch Council of their particular division of the kingdom. The president of the Council, by Section 9, must be chosen from the Council. Section 10 makes provision for the revision of the constitution of the Medical Council at any time by Her Majesty by an Order in Council, where Parliament does not object: the particular cases contemplated being new universities worthy of being represented in the Medical Council; or bodies having at first only collective representation, and so growing in importance as to deserve separate representation; or constituent bodies so diminishing in importance as not to be entitled longer to representation in the Medical Council.

We need not dwell here on Part II., which has reference to the admission of colonial and foreign practitioners to separate lists in the Medical Register on the strength of certain diplomas satisfactory to the General Medical Council, save to notice Section 13, which provides that a person holding a colonial or foreign diploma not recognised by the General Medical Council may appeal to the Privy Council, and that the Privy Council may then order the General Medical Council to recognise such diploma.

Part III. of the Bill empowers the Privy Council to take action, in default of the Medical Council, in respect of

inefficient examinations, and provides that any two or more Lords may exercise the powers it confers on the Privy Council. It contains a clause securing the existing privileges of all practitioners now registered, and other miscellaneous and less important clauses.

The analysis of the Bill leaves us little space for criticism to-day. We cannot say that it is a Bill which rouses our enthusiasm. True, it concedes four direct representatives—but only by a gross process of addition to a Council, already far too large, where they would be hopelessly outvoted and outnumbered by the representatives of corporations and universities. The Bill deals timidly with the great questions of Medical Reform. It shirks them. It does not directly or materially reduce the number of licensing authorities. It does not reduce, but increases, the size of the Medical Council. There is an unpleasant assertion of the Privy Council in the Bill, as if the Medical Council would not be able to appoint an inspector or to pronounce on the efficiency of an examination without the sanction of the Privy Council. And in the foreign and colonial part of the Bill it is actually provided that the Privy Council, on appeal by a foreign graduate, may override the Medical Council and order it to recognise a foreign diploma of which it does not approve. It almost reads as if the Bill meant to provide powers for the Privy Council to supersede the Medical Council. There is much in the work and constitution of the Medical Council to have provoked such an effort on the part of the Government. But it ought to be possible to construct a Medical Council which might be trusted with full powers to govern medical education. The Bill gives the Medical Council no power of supervising examinations for higher titles. It makes no attempt to strengthen or simplify the penal clauses of the Medical Act, though from every large town the constant fraud of unqualified practice is reported. It is no doubt important to provide for the admission of foreign and colonial practitioners, and even to define the terms on which women are to be admitted to the profession. But these are objects infinitely less important than a sound and courageous reform of the Medical Council and the licensing bodies, and a proper provision of means for protecting the public from false and fraudulent practitioners.

THE magazines and newspapers have lately been discussing at great length the attractive topic of the choice of reading, and the merits of the best hundred books which the world has hitherto produced. However interesting and suggestive such a discussion may be, its value is largely undermined by the consideration that the mental aptitudes and intellectual needs of individuals are as varied as their physical features, and cannot be adequately met by any process of arbitrary selection. We do not choose food for the body with a view solely to obtaining the maximum of the nutritive elements. Experience teaches us that we must have regard to individual taste and individual need, and that digestibility and assimilability are more necessary qualities in our food than the possession of the greatest amount of carbon and nitrogen. A similar principle must regulate the choice of intellectual food if we would secure intellectual growth and avoid intellectual dyspepsia. PLATO and SPINOZA are no more suitable to every mind than cheese and beef essence to every stomach.

In the discussion to which we refer, attention has been directed rather to systematic than to desultory reading, to profit rather than recreation. Yet literature fulfils one of its noblest ends when it simply refreshes the jaded brain-worker, and reanimates him for fresh intellectual effort. Amusement and distraction are among the prime necessities of our nature, and can nowhere be more easily and innocently obtained than in following the devious plot of the novelist, or smiling at the sallies of the satirist, or watching the luminous sparkle of the poet's fancy. The garden of universal literature lies open, decked with a countless variety of hue and exhaling an infinite diversity of odour, and we need but to train the eye and cultivate the sense in order that we may enjoy its fragrance and taste of its sweetness. In teaching us what to read and how to read education fulfils one of its most necessary objects. It furnishes us with the passwords by which we can traverse the barriers of time and space, and enjoy the intellectual treasures of every race and every age.

No men need recreative reading more than medical practitioners, or are more likely to derive from it the peculiar form of intellectual distraction which they require. The absorbing character and scanty leisure of medical life are hostile to the cultivation of tastes and accomplishments which call for prolonged application; but the daily duties of the average practitioner involve very little bookwork, and in books, therefore, he can find that relief and variety which constitute the most essential features of the rest and solace so loudly demanded by the overtaxed brain. The barrister, clergyman, politician, or author, whose daily work involves a frequent reference to books, cannot take down a favourite volume with the same zest and freshness as the medical man who has been engaged during the day solely in the contemplation of disease. Books have a further recommendation to the busy practitioner. They can be taken up or laid aside at will; they can be carried in the pocket and enjoyed during the casual moments of leisure; they serve to distract the mind without in any way unfitting it for renewed application to the problems and duties of the hour; they are the only friends who are always present when their presence is grateful, always conversable when converse is desired, yet absent or silent when absence is welcome or when silence is golden.

In suggesting the choice of recreative reading to medical men, we would guard against the error to which we have above drawn attention—the error, namely, of laying down specific rules in a case where everything depends upon individual taste and individual training. History, philosophy, poetry, and fiction have each their place and their value, which cannot be adjudged according to any absolute and abstract standard, but vary with variations in intellectual taste and capacity. We think, however, we are safe in affirming one general rule—viz., that more true solace and abiding satisfaction are to be obtained from the loving and repeated study of some great classic than in the perusal of the ephemeral literature of the day—"wet," as Mr. RUSKIN describes it, "with the latest spray of the fountain of folly." The practitioner who carries about with him a well-thumbed "Homer" or "Horace," or a "Shakespeare"

or "Goethe" soiled with stains honourable alike to poet and to reader, possesses a talisman of unfailing potency to relieve weariness, and to sweeten the worries and annoyances of his career. Another, to whom poetry is as a casket sealed, can revel in the fruits of SCOTT'S noble fancy or in the humour and pathos of DICKENS. Poetry and romance have an undoubted applicability to the needs of the profession of medicine. Medical life is contracting or broadening, material or spiritual, according to our habits of thought and individual susceptibility, just as the same course of discipline now evolves a hero, now a craven. There are some to whom man in his birth and death, his laws of health and of disease, his passions and his capacities, seems but little elevated above the beasts that perish. Others, again, see an infinite pathos and an unfailing purpose in the great drama of human life, and amid the vicissitudes of hardship, suffering, and disease recognise the essential nobility of man. Poetry and romance are one mode of deciphering the perplexing enigmas of existence, and those whose daily path is through the valley of the shadow of death will do well sometimes to avail themselves of their luminous aid. Medical practice being essentially a process of observation of human life and human fortune, the practitioner will derive peculiar satisfaction from the writings of the philosophical essayists, such as BACON, MONTAIGNE, or EMERSON, in whose works he will find the facts which daily meet his eye analysed from a point of view widely different from his own. He regards human life in the concrete, they in the abstract. He deals with men and women, they with *man*.

Works of travel may be recommended for recreative reading, not merely from their intrinsic interest, but because of the important part which climatic treatment is beginning to play in the therapeutics of disease. There never was a time when a knowledge of foreign countries and foreign climates was so practically important to the medical practitioner as to-day; and while it is indisputable that such knowledge can be thoroughly and satisfactorily obtained only from personal experience, it is nevertheless true that much useful information on the subject can be agreeably gained from the vast and increasing literature of travel. It is a sign of the objective and utilitarian spirit of this age that the authors of the best works of travel no longer fill their pages with idle reflections and petty personal details, but furnish us with much precise data for induction in the form of maps, meteorological tables, and statistics of disease.

Recreative reading is a vast subject, and we can but touch its fringe. We desire merely to remind the practitioner that, in availing himself of the stores of literary wealth at his command, there are principles of choice peculiarly applicable to himself, and that the recognition of those principles will tend to the augmentation alike of pleasure and of profit.

THE discussion on Supra-pubic Lithotomy which was held at the Medical and Chirurgical Society at its last meeting is of historical as well as practical interest, for it marks in a very decided manner the revival of an old and discarded operation. Surgeons were met together not to discuss some new procedure, but the advisability of practising an operation which, once in vogue, had been deliberately and repeatedly abandoned on account of its high mortality. It would be a mistake to regard this as a mere swing of the pendulum, for in two important particulars the conditions are different now from those which prevailed when the "high" operation was abandoned in favour of the "low." The most important alteration is that which results from the introduction and improvement of lithotrity. Except in certain special conditions, only calculi of very large size are now removed by lithotomy, and therefore the question at issue has come to be, in the main, Which is the best method of removing *large* stones from the bladder? Looked at from an anatomical point of view this question admits of but one answer, for not only is the anterior part of the pelvic outlet narrow and flanked by rigid walls, but the removal of a large stone through it must be attended with damage to the prostate and may injure other important structures as well. The space above is amply sufficient for all requirements, and, if we exclude the peritoneum, there is no structure or organ about the fundus of the bladder liable to suffer under the manipulation of the "high" operation. The danger of the "low" operation largely depends upon the size of the stone removed, and the mortality rises with each additional drachm of weight. It would have been impossible to remove through the perineum the huge mass of calculous material shown by Mr. RIVINGTON, and success could not be hoped for in stones of much less size. But the danger of injury to the peritoneum in the "high" operation proved so great as to lead to the practical abandonment of this procedure, and it was only when Dr. GARSON showed that this danger could be obviated that surgeons again turned their thoughts to this operation. It is the combination of these two conditions—the reserving for lithotomy of cases of very large calculi only, and the demonstration of the means of avoiding injury to the peritoneum—which has tended more than anything else to revive the supra-pubic operation. On this point professional opinion is fairly unanimous; but the discussion last week showed a marked divergence of opinion on two questions of considerable importance—the value of rectal distension and the relative advantages of the "high" and the "low" operation for small stones. Dr. GARSON'S experiments are well known; they have been endorsed by PETERSEN, THOMPSON, and BRYANT; but Mr. BARWELL controverts them, and urges that any safe amount of distension of the bowel is powerless to raise the reflection of the peritoneum from the bladder to an appreciable extent. In such a matter positive evidence is of more value than negative; and we cannot but think that Dr. GARSON has proved his point, and that the bulk of recent clinical experience affords very strong support to his view. Such a fact as that mentioned by Mr. CADGE, as well as others, shows, however, that care must be exercised in this matter, or serious mischief from stretching, compression, or rupture of the bowel may result. Not only does the plan of rectal distension push upwards and forwards the bladder and expose a considerable surface above the pubes, but it supports the viscus below and renders the manipulation of its interior more easy. This point was insisted upon by Sir HENRY THOMPSON, and is certainly one of some moment. The distension of the rectum carried out cautiously is likely, therefore, to be generally resorted to, although it has been shown to be not free from danger.

The discussion as to the choice of an operation for children, or when from any circumstance a *small* stone in the adult has to be removed, is by no means closed. Much can be urged on both sides. For such cases the perineal operation is simple and safe, whereas our modern experience of the "high" operation is but slight, and mainly gained under the condition of a very large stone to be removed. But looking to the danger and inconvenience resulting from any injury to the neck of the bladder, and the proved safety of the supra-pubic operation, it is probable that it offers us the best means of removing even small calculi. This is particularly the case in children in whom the bladder is an abdominal rather than a pelvic organ.

To sum up, then, the position would seem to be fairly stated as follows. For the removal of very large stones, such as are now generally reserved by lithotomy in adults, the supra-pubic operation is distinctly superior to the perineal, being both safer and offering greater facilities for the extraction of very large stones. For small stones which are not removed by lithotrity the line of practice is less clearly defined; but the "high" operation should be thoroughly tested, as it appears to possess distinct advantages over the "low." Distension of the rectum is useful both in supporting and raising the bladder and in separating the peritoneum from the pubes, but care must be taken not to injure the bowel by too great distension.

DISCUSSIONS on medical education and legislation have more than once exhibited our brethren north of the Tweed in a very susceptible mood. If they have not exactly resented criticism, they certainly have not courted it; and anyone who has ventured to call in question the economical and scientific organisation of the Medical Faculty in Edinburgh has not had an easy time of it. But Scotch criticism of Edinburgh doings must be free from the suspicion of jealous inspiration, and its accuracy cannot be at fault for lack of local information. To such a criticism on professorial work and professorial pay in Edinburgh, the *Scotsman* of Friday, the 2nd inst., devoted no less than three columns and a half. Their perusal gives a rude shock to the prevalent notions that science does not pay, and that scientific men are not good men of business. The times are admittedly hard, but if the Scotch professors have ever heard of shrinkage of income, they certainly have not realised it, if we are to judge from the *Scotsman's* figures. The clear income of the fortunate incumbent of the Anatomy chair is in round numbers £3400, and his physiological colleague nets about £2100. The summary is very remarkable:—Total income of chairs in medical faculty, £26,628; total expenditure of chairs in medical faculty, £5180; total clear income of chairs in medical faculty, £21,230. Average clear income—(1) Of five professors without practice £2200; (2) of seven professors with practice, £1460. "Universities exist, not for the professors, but for the public; and in the public interest it is desirable that the University revenues should be employed in the way most advantageous to the students and to the community. Surely a gross income of £26,600 ought to maintain more than twelve professors, no matter how eminent. If that sum were paid into a common University chest, as has been proposed, there is no doubt that wise and careful administrators could equip with it a medical faculty, not of twelve, but of twenty chairs at least, with the necessary complement of assistants to each. There would also be in that case an increase in the amount of research work done in the University, which is at present shamefully small. The shortcoming is due partly to the lack of research endowments, partly to the fact that the professors are too well off, and have a tendency—with a few notable exceptions—to rest with their laurels, and to become indifferent to the progress of science." These are not the expressions of an English critic, but the *ipsissima verba* of the *Scotsman*.

Annotations.

"Ne quid nimis."

THE ELECTION OF PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS.

IN answer to many inquiries respecting the forthcoming election to the presidency of the Royal College of Physicians, we may repeat the statement we made last week, that we have no doubt that Sir William Jenner, if elected, would consent to serve for another year. There can be no question that at present, when important matters affecting the vital interests of the profession are pressing for solution, the occupancy of the presidential chair by Sir William Jenner for another year would be of the greatest advantage, not only to the College of Physicians itself but to the whole profession.

"REST AND REPAIR IN LONDON LIFE."

DR. ROBSON ROOSE has followed up his article on "The Wear and Tear of London Life," which appeared in the *Fortnightly* of February, with a paper on "Rest and Repair in London Life" in the number for April. The supplement is a pleasantly gossiping discourse on the best method of self-management in view of the worry and waste which life in society entails. There is much to interest the reader, and likely to prove useful, in the advice offered. On one point which may be specially noted Dr. Roose's counsel is of great importance. Treating of the difficulties of digestion which so commonly embarrass brain-workers, he directs attention to the great need there is of recognising the absolute requirement of power to digest when food is taken. Thus: "Take the case of a man who, after a hard day's work, sits down to dinner at eight or half-past, having taken a hasty and scanty lunch some hours previously. His sensations tell him that he is terribly in want of food, but they do not warn him that he has little or no power of digestion left. He eats freely and rapidly, and one form of discomfort is soon exchanged for another. Digestion goes on very slowly and the process is far from complete when bedtime comes. The sufferer is weary, but sleep is unrefreshing, and probably broken by dreams or nightmare. He begins the succeeding day weighted with the burdens of its predecessor." This is a true picture. The "power of digestion" is a necessity, and it is quite possible to be too much exhausted to take advantage of nutriment which has been too long withheld. The energy of recuperation may be itself impaired by whatever unduly exhausts the organism, and when this is at a low ebb there will be difficulty in the process of recovery by digestion and assimilation. Dr. Roose thinks seven o'clock is quite late enough for the dinner hour, and he would make the luncheon a fixed meal. He also recommends half an hour's rest before dinner. This he believes would "avert many of the troubles which are caused by taking food when the stock of nervous energy necessary for digestion has been well-nigh exhausted."

We allude to this point only, but Dr. Roose discusses with much ability and in a practical sense most of the matters of moment relating to the subject he has taken in hand.

HOSPITAL ISOLATION OF SCARLET FEVER IN LONDON.

IN the Registrar-General's Annual Summary of the vital statistics of London and other large English towns in 1885, which has just been issued, attention is called to the fact that the mortality from scarlet fever in London has during the last fifteen years been constantly below the mean mortality in the whole country, while the London mortality from both measles and whooping-cough has shown an excess almost as constant. Moreover, it is pointed out that prior to 1871 London did not enjoy such comparative immunity from epidemic scarlet fever, the mortality from this disease being higher than the mean rate in the whole country. It is suggested that this recent marked decline in the mortality from scarlet fever in London may be to some extent due to the increasing use of public hospitals for the isolation of cases of this disease. In support of this suggestion it is stated that 5 per cent. of all the deaths from scarlet fever in London in 1878 were recorded in the fever hospitals under the control of the Metropolitan Asylums Board. In the next three years, 1879-81, the proportion ranged between 7 and 8 per cent., in 1882 the percentage rose to 9·3, in 1883 to 11·4, in 1884 to 16·4, and during last year 19·2 per cent. of the deaths from scarlet fever occurred in these hospitals. This suggestion as to the cause of the persistently low death-rate from scarlet fever in London in recent years deserves, as the Registrar-General remarks, the serious attention of those engaged in the sanitary administration of our large towns.

ILL-DEFINED FEVER.

ATTENTION was recently called to the fact that during the ten years 1871–80 there were 25,643 deaths registered in England and Wales from "simple continued fever," and that under this heading are doubtlessly classed more than one disease. It may be useful to refer to this subject in order, if possible, to throw some light upon the true signification of this heading. Prior to 1869 the certification of deaths from "fever" was so unsatisfactory that no attempt was made in the Registrar-General's reports to separate even typhus from enteric or typhoid fever. The report for 1869 gives 4231 deaths from typhus, 8659 from enteric fever, and 5310 under the heading then called "simple continued fever," which included all deaths from "fever" which could not be placed under the other two headings. The "fever" heading in the Registrar-General's reports prior to 1869 was somewhat unfortunately called "typhus," and there is no reason to doubt that the word "typhus" continued long after that date to be loosely used in medical certificates as a generic term for "fever." Medical certificates have, however, much improved in this as in other respects in recent years, and on reference to the last published annual report we find that only 963 deaths were referred to the heading now called "simple and ill-defined fever," to which, as in 1869, when the distinction was first introduced, all deaths from "fever" are referred which cannot be classed either as typhus or enteric fever. Thus, in 1869, 29 per cent. of all the deaths from "fever" were referred to "simple and ill-defined fever" for want of definite description in the medical certificates; whereas in 1883 the proportion of these ill-defined "fever" deaths had fallen to 12 per cent. It is not without interest to inquire how these fatal cases of ill-defined fever are described, and the Registrar-General's weekly returns throw some light upon this question, as cases of ill-defined fever in London are there referred to in detail. The number of these ill-defined fever deaths in London in 1885 were 82, against numbers declining steadily from 312 in 1875 to 78 in 1884. Of these 82 deaths, 25 were merely described as "continued fever," giving no assurance that some of them were not really cases of scarlet fever or even of small-pox; only 13 were described as "simple continued fever"; 13 merely as "fever"; 7 as "febricula"; 9 as "low fever"; 2 as "eruptive fever"; 2 as "simple fever"; and 2 as "suppressed fever." The remaining 9 cases were described in as many different ways, such as infantile fever, exhaustive fever, acute specific febrile disorder, &c. There is no reason to doubt that the gradual decline in the proportion of these ill-defined cases of "fever" will continue, but in the meantime due account must be taken of this disturbing element when comparing the death-rate from enteric fever in recent years, as the registered numbers of deaths from this disease are being constantly increased by the transference of deaths from ill-defined forms of fever; while, on the other hand, the number of deaths incorrectly referred to typhus is as constantly decreasing.

FOOD PRESERVATIVES.

AN interesting paper was recently read by Messrs. Sulman and Berry before the Chemical and Physical Society of University College; it was important also from its practical bearings on the preservation of foods, and especially milk. Their investigation, limited to the boracic, salicylic, and benzoic compounds, proved that such substances as aseptin, glacialine, and boroglyceride owed their preservative qualities almost exclusively to the free acid contained in them. Boroglyceride contained 25 per cent. of the genuine boracic ether of glycerine, and 75 per cent. of free acid and glycerine in equivalent proportions. The true compound, the ice-like solid, is immediately resolved into free acid and glycerine by the addition of water, and this reaction probably takes place when the true compound comes into contact with aqueous liquid or animal tissue. We agree with the authors of the paper that the use of so much free boracic acid is undesirable and injurious, especially as a preservative of milk for children. Salicylic acid and salicylates are not substances that can be used with impunity, and as they appear to be useless as preservative agents, their rejection is doubly necessary. Again benzoic acid precipitates the casein of milk. The best agent appears to be benzoate of soda, which is tasteless when pure, is one-third more powerful than boracic acid, and innocuous when taken in small quantities for prolonged periods.

LATE CLOSING IN WHOLESALE HOUSES.

WHOLESALE traders have all along been the most steady opponents of the measure for reducing the working hours of shopmen. They endeavour to defend their position by a double argument. On the one hand, they seek to convince us that an occasional sudden influx of custom demands, while it lasts, a prolongation of the period of daily work in order to meet it, and that this cannot be obviated; on the other they would have us believe that, slack and busy seasons taken together, the average duration of work bears very lightly on the employed. With the former contention we do not now concern ourselves, though it must be obvious that more men working within an allotted time will do as much as fewer working overtime. With regard to the question of average daily occupation, there is apparently much variation in the evidence of statistics. Some of our readers have doubtless been struck with the announcement of Mr. Alderman Evans that seven and a half hours represented the mean working day in most of the large warehouses in the City of London throughout the year. The statement is

a remarkable one. It may, as Mr. Evans maintains, find some confirmation in the usage of the firm with which he is connected. We cannot accept it as generally applicable. It is exceedingly difficult of reconciliation with the notoriously long working time in many similar establishments in seasons of pressing business, except on the supposition that for a great part of each year trade of a given kind can hardly be said to exist. Callings which admit of so much leisure are fortunately few. Their influence cannot seriously affect the general course of corrective legislation. Facts have, on the other hand, been adduced by a writer in opposition to the above statement, which show that in certain large wholesale establishments young boys are worked for five or six months a year from 7 or 8 A.M. till 10 P.M., and even till after midnight, during five days in the week. Are we to understand that in houses of this kind no work at all, or next to none, is carried on during the rest of the year? On no other theory can these conflicting facts be made to agree, and ordinary commercial practice forbids this supposition. Should we even go so far as to admit that a low average may thus be attained, the proof in favour of late closing is still imperfect. It by no means follows that the stamina of youths, however robust, should be put to so severe a test as a strain of labour continued for several months, and occupying every hour during which recreation is ordinarily possible, save perhaps those devoted to meals.

MYCOTIC ENDOCARDITIS.

DR. WYSSKOWITSCH details the particulars of an experimental inquiry into the nature of ulcerative endocarditis (Virchow's *Archiv*, 103, Heft 2), to which is prefixed an account of the histological examination of twelve cases of endocarditis in the human subject. Four of these cases were chronic valvular thickening with calcification and necrotic areas, surmounted by warty deposits of fibrin; in four others the vegetations were more or less vascularised at their union with proliferated endothelial layers (thrombo-endocarditis); the ninth case appeared to be a chronic condition of the preceding; the tenth and eleventh showed post-mortem œdema after chronic endocarditis, with, in one case, bacteria (undoubtedly saprophytes). Lastly, there was a recent case of ulcerative endocarditis, which yielded abundance of micrococci on the valves, in the spleen and kidneys; on cultivation the micro-organisms had the characters of staphylococcus pyogenes aureus. The experiments which form the second part of his paper consisted in inflicting on rabbits an injury of the aortic valve by means of an instrument passed down the carotid artery; then injecting into a vein a few hours later cultures of various micro-organisms. It was shown that the operation of piercing the valve was well borne, and not *per se* followed by any pathological consequences; but that the inoculation was often productive of a malignant mycotic endocarditis upon the injured valve, with secondary metastasis, as in human ulcerative endocarditis. These positive results occurred when the inoculation was made with either of the following micro-organisms: Streptococcus pyogenes, staphylococcus pyogenes aureus, and coccus sepsis (Nicolaier); but the injection of micrococcus tetragonus and bacillus pneumoniæ had no such sequel. It was also found that the staphylococcus produced much inflammatory reaction and suppuration, whereas the streptococcus, although causing much more valvular deposit and more numerous infarctions, had no such severe action. The changes in the heart and vessels were not limited to the valves pierced by the stylet; the micrococci growing also on the mitral valve and aortic wall, which happened to be eroded by the passage of the instrument. It is therefore suggested that mycotic endocarditis may be of various forms depending upon different varieties of micro-organism. Other experiments to induce endocarditis after inhalation and subcutaneous injection of streptococci yielded negative results; but it was found that the rabbit can only bear inhalation of very small quantities, and it was doubtful if the micro-organism entered the blood stream at all. Professor Orth, under whose direction this research was undertaken at Gottingen, comments in another article upon the results obtained; they prove, he thinks, that the term "disposition" is no empty one, the mechanical injury of the tissue laying it open to the attacks of the micrococcus which is deposited in the clots. The experiments show also how slight may be the amount of injury required to so lower the vital resistance of the tissue.

VACCINATION AND THE HOUSE OF COMMONS.

EXTRACTS from the 1884 Report by Dr. Buchanan, F.R.S., to the Local Government Board on the subject of the Relation of Small-pox to Vaccination are being distributed by that Board to members of Parliament and others. The convincing proofs which those extracts afford of the immense benefits conferred by primary vaccination on the infantile population, and by efficient revaccination on those of a more mature age, will, we trust, come with new force at a time when the list of notices of motions in the House of Commons contain indications of attempts, more or less direct, to deprive that class of our population which is alone unable to take care of itself of the greatest protective against preventable disease which has ever been discovered. It would be well for all who have the welfare of their fellowmen at heart to urge members of the House of Commons carefully to study these extracts before recording any vote on the vaccination question.

THE LEA AND RIVER POLLUTION.

THE Parliamentary Committee appointed to inquire into the state of the River Lea sat again last week, and received the evidence of Major Flowers, the engineer of the Lea Conservancy Board, who gave an account of the steps taken to abate nuisance. Major Flowers is reported to have stated in the course of his evidence that he was of opinion that "no chemical process was of itself sufficient to bring sewage water up to a point of purity at which it might safely be restored to a state that would allow of drinking-water to be drawn from it, or the state in which the river should be for the purposes of recreation." The Luton sewage, he said, had proved a difficulty, and at his suggestion had been dealt with by means of a sewage farm, but the effluent was impure, as it could not be freed from all the chemicals which were mixed with it. Major Flowers' evidence as to the general condition of the Lea in its several parts will be read with interest at a time like the present, when there is indication of the reappearance of cholera in France. Above the first intake of the New River Company the water was good—as far as river water could be good. Between Hertford and Ware, where the Manifold Ditch fell into one of the affluents of the river, the appearance of the ditch-water was black and slimy; the black slime could be seen lying on both banks of the river, and a nasty smell was present. At Cheshunt, above the East London Water Company's intake, there was a great deal of pollution from sewage being pumped into the river. Sir Frank Bolton stated that he had analysed the water at the East London Water Company's works, and found but few traces of pollution; this he attributed to the great volume of water; but the East London intake compared unfavourably with that of the New River Company. Concerning the general question of river pollution, we are informed that the Rivers Pollution Bill did not meet in the House of Commons with

the consideration that was expected, very much because Mr. Hastings, who had charge of the Bill, was unavoidably absent on the night it came up for the second reading. The statements of the Attorney-General at the Mansion House meeting on the 10th ult. had led the Society which was promoting the Bill to assume that it had the approval of the Government, and they were therefore much taken by surprise at the course the Government subsequently adopted. It was certainly unfortunate, under these circumstances, that Mr. Hastings, who could have explained all its details, was not present.

FORMATION OF MARSH GAS AND CARBONIC ACID FROM CELLULOSE.

HOPPE-SEYLER has come to the conclusion that the production of marsh gas is the result of a process of fermentation of a very general character. He has examined a large number of gaseous discharges taken from places where the water was pure but the soil contained several kinds of vegetable matter. It was found that marsh gas preponderated under such circumstances, more than half the volume of gas collected being composed of it; the remainder consisting of nitrogen, hydrogen, and sometimes oxygen and carbonic acid. Warm weather increases the emanation of gas from waterlogged soils. Observations on Lake Constance showed that temperature has far more influence than the composition of soil in the production of gas. The next step in the process of discovery is the source of the gas—the kind of organic matter. There seems to be but little doubt that the cellulose of vegetables is the material source of the gases; vegetable remains anywhere deposited become humus substances. If a glass flask, with drawn-out neck dipping under mercury, be filled with mud containing vegetable remains and water, a mixture of gases may be obtained consisting of marsh gas, a large proportion of carbonic acid, and a little nitrogen, that soon disappears. This development of gas may go on for months, the quantity evolved varying with variations of temperature, though the total discharge differs but little. In nature the carbonic acid diffuses rapidly into the surrounding water, by which it may be dissolved, or where the water is shallow, elaborated by plants, so that the tension of carbonic acid on the surface of mud is always kept low. In spring, with its low temperature, the soil becomes coated with diatoms, decomposing the carbonic acid and favouring diffusion by their movements. Low forms of plants displace the diatoms in the summer time. The influences of this general process of gaseous evolution upon the life of organisms and on geological strata and lodes must be great indeed, and Hoppe-Seyler promises further information from future investigations.

THE TAUNTON SANITARY HOSPITAL.

THE so-called Taunton Sanitary Hospital affords an example of the great utility of establishments provided by sanitary authorities for the isolation of cases of infectious diseases. It was the result of joint action between the urban and rural districts of Taunton, and was ready for use in 1879; accommodation being provided for the immediate and simultaneous isolation of first attacks of at least two different infectious fevers in both sexes by means of twenty-four beds, each having 144 feet of floor space and 2000 cubic feet of air, together with ample means of ventilation. Each year Dr. Alford issues a special report of the proceedings of this institution, and he has been able to show, over and over again, how wise has been the expenditure which was originally incurred in erecting the buildings, as also that still devoted to the maintenance of the hospital. During 1885 no less than 205 cases were admitted, 166 coming from the urban and 39 from the rural district. The number of patients was exceptionally large; it was brought about by an importation of small-pox, and it necessitated the provision of temporary buildings. Many authorities have objected that compulsion would be necessary to the proper use of such a hospital. This has been conclusively shown to be an erroneous view in the Official Report on the Use of Infectious Hospitals; and Dr. Alford's testimony is in the same direction, for he states that he has not had occasion in any case to resort to compulsory powers in order to secure removal to the hospital. He admits what is well known—namely, that it is amongst the most ignorant and the poorest that the greatest objection is found to accept the means of isolation afforded by such a hospital. There is, however, no more powerful method of removing the ignorance which leads to this feeling than the provision of a hospital, every separate use of which has its educational effect on the classes benefited by it. In Taunton some people use the building who desire to pay for the privilege, and £54 were thus reimbursed to the authority; but this is only an incidental feature in the finances of the district, the main point being that a vast sum in excess of the cost of isolating 205 cases of infectious disease was saved, which would have been incurred if these cases had been left to distribute infection in all directions.

THE ISOLATION OF DIPHTHERIA IN THE METROPOLIS.

WE are informed that the managers of the Asylums Board, having been requested to receive cases of diphtheria into their hospitals, and being precluded from doing so by the orders under which their institutions are regulated, have communicated with the Local Government Board on the subject. Every year makes it more and more evident that the Metropolitan Asylums Board must become the principal Isolation Authority for London, and it must be clear to all who know how largely prevalences of diphtheria are due to the spread of infection from person to person, that no such authority can fully perform the duties required of it which does not arrange for the isolation of cases of that disease. The large amount of accommodation hitherto held in readiness in London for the reception of cases of small-pox could easily be devoted to other infectious diseases, including diphtheria, now that small-pox is, with certain exceptions only, to be at once removed to floating and land establishments down the river.

MEDICAL ORDINANCE, CANADA.

THE following regulations relating to medical practice in the North-West Territories, Canada, were passed at the close of last year by the North-West Council. The Ordinance No. 11, relating to medical practitioners, provides that any person not registered according to the ordinance who practises or professes to practise physic, surgery, or midwifery in the North-West Territories for hire, gain, or hope of reward, or who advertises to give advice on these subjects, shall upon summary conviction before a justice of the peace be liable to a fine not exceeding $100; and any such person who takes or uses any name, title, addition, or description implying or calculated to lead people to infer that he is recognised by law as a physician, surgeon, accoucheur, or licentiate in medicine, surgery, or midwifery shall also be liable to a similar fine, the burden of proof in such cases to be upon the person charged. These penalties are recoverable from March 1st. The following persons are allowed to register under the ordinance:—(*a*) Persons residing and practising medicine &c. in the territories on December 18th last who hold a medical degree, diploma, or licence from any university, college, or corporate body in Her Majesty's

dominions empowered by law to grant such degrees or licence, on payment of a fee of $5. (*b*) British subjects resident in the territories who have been practising medicine therein for one year previous to December 18th, 1885, who hold a medical degree, diploma, or licence from any university or college in the United States whose curriculum demands two years' attendance at medical and surgical lectures, which is authorised by law to grant such degree or diploma, on payment of a fee of $5. (*c*) Persons residing and practising medicine in the territories for one year previous to December 18th last, who shall before December 18th, 1886, pass an examination before any two medical practitioners, registered under the ordinance, appointed by the Lieutenant-Governor, on the subjects of anatomy, chemistry, physiology and materia medica, the principles and practice of medicine, surgery, and midwifery, paying such examiners a fee of $10 each, receiving from them a certificate, and paying a registration fee of $25. (*d*) Persons who shall hereafter become residents of the North-West Territories possessing the qualifications set forth in sub-section *a*, on payment of a registration fee of $50. Fees payable under the ordinance go to the general revenue fund of the territories.

HOSPITALS AND THEIR CLAIMS.

WE are glad to see the Duke of Westminster and others, who have it in their power to give great help to hospitals, expressing themselves publicly in support of these institutions, which are places of hospitality and help to all—even to the rich when overtaken with accident, but mainly to the poor. The public little know what generous service is given gratuitously and secretly to the poor by the members of our profession, or they would be eager to share the service by such gifts as they can bestow. We quite casually heard the other day of a senior physician of a northern metropolitan hospital being consulted in the middle of the night by a careful house-physician about two urgent cases of poor children who had been brought in. With true humanity, the physician lef this bed and home and went to see the cases for himself. It is facts of this sort that we commend to the consideration of those who—not from want of heart, but from want of thought—leave the problem of hospital support to hospital physicians and committees, as if some secret manna and comfortable beds fell down from heaven into these institutions, where the poor have the advice and skill they cannot buy.

THE PEND-JEH SORE.

DR. SUSKI, while on duty with his regiment in the neighbourhood of Merv, describes in the *Vrach* (No. 9, 1886) what is known in that locality as the Pend-jeh sore, which, he says, attacks nearly all persons who live or stay in the neighbourhood of Pend-jeh. His description is unfortunately limited to the naked-eye appearances, as he was unprovided with microscopical apparatus. He divides the disease into three stages. 1. A red spot appears, about the size of a millet-seed, which gradually increases to that of a pea or larger, in the centre of which a hard papule develops, which suppurates, bursts, and forms a primary sore, affecting the whole thickness of the skin, of a circular shape, about the size of a hemp-seed, with a dirty base and precipitous edges. 2. The sore enlarges, and close to it a second develops in the same way as the first, which, in its turn, is succeeded by others; these run together in groups, forming compound sores of the size of a five-kopeck-piece—i.e., of a penny—or even larger still. These affect the whole thickness of the skin, and have vertical edges and swollen circumferences, and are of a red colour. In addition to the sores, small enlargements appear in the thickness of the skin of the limbs, having the general direction of the lymphatics. The colour of the surface over these nodes undergoes no change. They are looked upon by the natives as pathognomonic of the disease. The larger glands were not swollen in any of the cases under observation. The sores secreted a considerable quantity of pus. 3. The healing process commences after the sores have been open for some time, and it nearly always begins at the spot which was first attacked. Granulations arise having a papilliform appearance, and reach the level of the skin or sometimes rise above it. These cicatrise usually under scabs, and if the latter are carefully removed the cicatrices themselves are seen to have a papilliform appearance. Between the healing points small dark-grey scabs appear, consisting of dust and dried pus, as may be seen with the aid of a lens if they are treated with alcohol and water. These little scabs are so closely adherent to the papillæ of the healing sore, that even when very carefully removed with forceps the apices of the papillæ are torn off and hæmorrhage occurs to such an extent sometimes as to require to be arrested. As the cicatrices harden the papillæ become atrophied. The cicatrix is depressed, and in the course of time becomes of a whitish appearance. The author believes that all the sores are developed from hair follicles, their favourite seats being the wrists, the ankles, the waist, the abdomen at the level of the waist, the forehead, the neck, and the face; more rarely the supraclavicular regions, the legs, the hands, the thorax, the back and the shoulders. With regard to the causes of the disease, he thinks they are to be found in the all-pervading powdery sand, the heat, which throws a great deal of work on the cutaneous glands, the bites of insects, and the sudden variations between day and night. The treatment found by Dr. Suski to be most advantageous was to wash the sores with a solution of corrosive sublimate of the strength of 1 to 1000, and dressing them with a mercurial ointment. At a subsequent stage a mixture of iodoform and alum was employed, and finally cauterisation with nitrate of silver.

THE HOMES OF THE WINDSOR POOR.

THE steps which are being taken to improve the sanitary condition of those parts of Windsor which were described last year at much length in our columns are necessarily slow, but we have reason to believe the difficulties are not insurmountable. Two distinct lines of action are required: the first involves the demolition of the unhealthy houses and the clearing of the site; the second, the reconstruction of proper homes for the working classes. To attempt to erect these on the site of those which are demolished would probably involve a larger expenditure than would make a reasonable pecuniary return; but money invested in this manner gives to a town an improved healthiness, diminishes sickness amongst those who at such times become a charge upon the ratepayers, and therefore it is unfair to look for more than a small rate of pecuniary interest on the money invested. There is, however, no reason why the scheme for improving Windsor should necessitate the erection of houses in the immediate locality of Bier-lane; Windsor is not so large that it would inflict a hardship on the residents of that part of the town if they were expected to occupy houses a short distance away, and where land for building could be had at a much lower cost than the site which is cleared. We understand that the Corporation would not be unwilling to entertain a scheme for laying out a road which would pass right through the unhealthy area, and which would lead to the demolition of some of the worst buildings; but if the Corporation were to adopt this course, there is no reason why the duty of building suitable houses for the inhabitants who are displaced should not be undertaken as a matter of private enterprise by those who wish Windsor well. We do not think there would be any lack of funds for this purpose

if the Queen were to give expression of approval to this plan. We are convinced that any measure which promises benefit to Her Majesty's poorest subjects will have the Queen's sympathy, and nothing but her great influence is required to set in motion those who would gladly devote their efforts to carrying out her wishes.

ALLEGED DEATH FROM HYDROPHOBIA.

AN inquest was held on April 3rd by Mr. Braxton Hicks, at the Parish Offices, Putney, touching the death of Hannah Phillips, aged fifty-five. The deceased seemed in good health until March 27th, but then complained of faintness and a choking sensation. On the following day she seemed to have "hysterics," which came on "whenever a drinking vessel was shown to her." Death occurred on March 30th, after paralysis had set in. At the post-mortem examination the pharynx and spinal cord were found much congested, the blood fluid, and inside the lower lip were some abrasions, which, on the evidence of Dr. Walker, were of "uncertain age." Now the deceased had a pet dog with one tooth, and it was suggested to her that she might have been bitten by the dog, but this she denied. In consequence of this suggestion, probably, she seems to have taken a dislike to her old companion and bedfellow, the said dog. Dr. Walker was of opinion that the cause of death was hydrophobia, but as there was some doubt on this head the inquest was adjourned in order to enable the police, under whose care the dog had been placed, to report on the state of its health. We must confess we are sceptical on the matter. Some of the symptoms of the deceased read uncommonly like those of angina pectoris—a condition, by the way, rare in the female sex. To our minds the post-mortem signs are too equivocal to form a reliable basis for a conclusion as to the real cause of death. We shall look forward with curiosity and interest to the fate reserved for the dog, whose reputation may be considered to be "under a cloud."

THE BEAUFORT LIMB ABROAD.

"THERE will come a time," says General H. H. Maxwell in his Seventh Report on Arms and Legs in Rome, "when the peg-leg will be as dead as the dodo," and the rapidity with which the Beaufort limb is finding favour in Europe more than justifies the prediction. The last *Bulletin Trimestriel*, the organ of the Count's own charity, "L'Assistance aux Mutilés pauvres," teems with evidence of the good effected by the rehabilitating invention—of bread-winners saved to themselves and their families, of the dread of amputation minimised, and of the army of labour reinforced. Science is thus made to walk hand in hand with benevolence, and the almsgiving public, in subscribing to the charity, have the comforting assurance that here at least their bounty is not wasted. From France the limb has won its way to Holland, where General de Stuers, ably seconded by Count de Limbourg Stirum, has founded a society for providing it to all deserving applicants. Of all Count Beaufort's lieutenants, however, the earliest in the field and the most successful in action has been General Maxwell, whose annual reports of the charity in Italy are looked forward to, not only for their record of substantial service done, but for the dramatic interest of their details and their pleasant vein of style. The report just issued—the seventh—is, except perhaps the first, the most interesting he has put forth, as showing, *inter alia*, how effectively he has overcome the crucial difficulty of securing perfect coincidence between the joint of the artificial and the joint of the natural leg. He can thus from Rome, with absolute certainty that there will be no misfit, supply M. Werber in Paris with measurements which enable that accomplished mechanician to furnish the required limb in a few weeks, and to send the quondam cripple on his way rejoicing. The General's mathematical proficiency has here stood him in excellent stead, with results that, gratifying as they eminently are, must be more than needed to sustain him in face of the *mitrailleuse* of mendicancy with which the charitable Englishman is in Latin countries assailed. A narrative of the consequences he has incurred by his "craze for cripples," and of the experience he is daily acquiring in turning the flank of the begging-letter writer, concludes in a vein of humorous melancholy his seventh year's record of assistance in setting lame Italy on its legs.

ST. MARY'S HOSPITAL.

ON April 3rd the annual festival dinner in aid of the funds of St. Mary's Hospital was held at the Albion Tavern, the Right Hon. the Lord Mayor presiding. From the report of the Secretary it appeared that the working of the past financial year had left a deficit of £6380, which was accounted for partly by increased expenditure incurred by the opening of new wards, and partly by a falling off in legacies. From want of funds the authorities of the hospital were unable to open the large accident ward of the new Mary Stanford wing. Owing, however, to the public spirit and munificence of Mr. J. D. Allcroft, the governors had been enabled temporarily to overcome the latter difficulty. This gentleman has endowed the new wing for two years, at a cost of £2000 per annum. We sincerely trust that the step taken by Mr. Allcroft will be followed in regard to other charities by the possessors of wealth in the metropolis. There is no reason why any one of our general hospitals should be crippled in its usefulness for want of supplies. We maintain that money spent on our public medical institutions is well laid out, for it gives to the suffering poor such aid in their affliction and infirmities as can be obtained in no other way. More than this, it decreases the rates by checking the influx upon workhouses and workhouse infirmaries. Dean Swift, when preaching on behalf of a charity, found, to his chagrin, that the morning's collection fell short of the anticipated and desired total. On being informed that it would be advisable to curtail the evening's discourse, since the one in the morning was long enough to weary his hearers and tighten their purse-strings, the celebrated divine decided to act on the advice. He took for his text the words, "He that giveth to the poor lendeth to the Lord," and with characteristic piquancy added, "Now, my friends, you know the terms—if you like the security, down with the dust." We heartily recommend to our readers the study of Dean Swift's racy address. Slightly altering a saying of Mr. C. H. Spurgeon, embodying a proposition and an appeal, we would venture to remark to the affluent, "The poor are your children; you will not let them starve."

THE PREPARATION OF WHEAT FLOUR.

ANY reform which aims at improving the quality of bread must be of general and professional interest. Late years have seen considerable changes in this direction. They have witnessed the reduction to something like its true place in public esteem of mere colour as a test of nutritive value. People think less of the white loaf than of yore; it is not now the unique model of perfection in bakery that it was once too readily taken to be. There is more respect for its brown wheaten fellow; and while we are not prepared to admit without reserve all the excellencies which have been claimed for the latter, we may fairly allow that it deserves to rank as a food of highly nutritive efficacy. The principle which preserves in the bran, with its nitrogenous, fatty, and saline constituents, some of the best constituents of wheat, is on the whole a

sound one. Its one objection is the inseparable association of irritating siliceous matter, which often precludes its free use among the sick, and in any case requires that the grain should be ground with more than usual care. This fact also places somewhat of a restraint upon the consumption of such bread even by the healthy. Among various methods which have been devised in order to meet this difficulty, our readers will recall that of Mége-Mouriès, which, by preserving the inner envelope while removing the outer coverings of the grain, succeeded in retaining most of what was nutritious in the bran with comparatively little indigestible or irritant matter. A revival of this mode of preparation has lately been described by Mrs. K. J. Dance in a little paper on bread-making. The authoress claims for her system that it is both more efficient and more expeditious than other processes now in use. Respecting its proper place among such we need not now express an opinion, but the soundness of the theory on which it is based at all events justifies the claim put forward that it should be fairly tested as to its practical value.

THE GENERAL HOSPITAL, JERSEY.

THE lamented death of Mr. Godfray of Jersey leaves a vacancy in the General Hospital. This hospital is an important institution, being the hospital for all Jersey, which has a population of 60,000. Hitherto all the work has been done by only one officer. It is felt almost universally by members of the profession in the island that this arrangement is indefensible. It is not in the interest of the poor that one man should be responsible for so much medical, surgical, ophthalmic, and other special work as is implied; still less is such an arrangement in the interest of medical science and art. Accordingly a petition has been forwarded to the States, and a letter to the Jersey Hospital Committee, on behalf of nearly all the registered practitioners of the island, praying that hereafter the hospital should be officered, as are all similar institutions in England and on the Continent, by a staff composed of two physicians, two surgeons, one physician for the treatment of women and children, and one for ophthalmic and aural cases. We do not doubt that the States and Hospital Committee will agree to some such arrangement as this. The public as well as the poor have a direct interest in making the work of the hospital as efficient as it can be made. By enlarging the staff the work will be better done, and all the advantages of a higher cultivation of hospital work will accrue to the general population.

WILMER v. AYLWARD AND OTHERS.

NOTHING of interest to members of the medical profession, as such, arises out of this suit, beyond what may attach to the proof that the question of *bona fides*, while all-important, is not in itself sufficient to protect any person acting under the provisions of the Lunacy Acts. It is true that the question left to the jury was whether the medical men had given their certificates "falsely and negligently," and, inasmuch as they did neither, they escaped censure; but the relieving officer, who admittedly acted in good faith, was mulcted in a comparatively heavy sum for damages because he caused the patient to be removed to the workhouse, either negligently or under a wrong impression. No increased sense of security, or perhaps we ought to say diminished sense of insecurity, can result from the decision in this case The fact remains that medical men sign certificates at their peril, and until the law is changed they must continue to do so. Whether the Bill now before the Lords, — if by any strange freak of fortune it should pass the Commons and become law—will place matters in a more satisfactory condition remains to be seen. We heartily hope it may, but meanwhile the counsel so often given in these columns must be repeated. No practitioner should sign a certificate unless he be compelled by the strongest force of circumstances to do so, and in the doing of this act he should bear in mind that he exposes himself to peril of annoyance, if not of injury, and should make his arrangements accordingly.

DRAINAGE OF IDIOPATHIC INTRA-CRANIAL ABSCESSES.

THE evacuation of traumatic abscesses of the brain has long been a recognised procedure, and has met with a fair measure of success. Recently Mr. Hulke has endeavoured to extend this practice to idiopathic abscesses within the cranium. A few months ago a man was admitted into the Middlesex Hospital, under Dr. Cayley, suffering from coma, which had supervened upon a long-standing purulent discharge from the ear. There were no localising symptoms. Mr. Hulke trephined the skull in the lower part of the temporal fossa, and by means of a director explored the temporo-sphenoidal lobe, without result. The operation was unattended with ill-results, but after the patient's death, a few days later, an abscess was found in the cerebellum. Quite recently a woman was under Dr. Cayley's care with similar history and symptoms, and intra-cranial suppuration was diagnosed. Mr. Hulke determined to explore the brain. In this instance he made an aperture in the cerebellar fossa of the occipital bone, and through a small incision in the dura mater he passed a director through the cerebellum in all directions, but without striking an abscess. Finding that the symptoms were unrelieved, he subsequently trephined the temporal fossa, and opened an abscess in the temporo-sphenoidal lobe. We believe these cases will be duly reported to one of the Medical Societies. They mark an important advance in cerebral surgery, but further comments upon them must be deferred until all the facts are before us.

THE BELGIAN MINERS.

AT the first International Congress of Hygiene held in Brussels, under the Presidency of the King of the Belgians, in 1876, the condition of the men, women, and children who work in the coal-mines of the Low Countries was denounced as opposed to the claims of humanity, the laws of health, and the general security of the community; the Belgian Academy of Medicine fifteen years ago pleaded the cause of the mining population; and medical men and sanitary reformers generally have pointed out the irreparable moral and physical injury done by allowing children of both sexes to work promiscuously in coal-mines. In spite, however, of all these earnest protestations, the Legislature of Belgium has done little or nothing to protect those who by hard necessity were compelled to sacrifice every consideration for the sake of a slight addition in the weekly wages earned by miners' families. Up to the year 1834 the work in mines was regulated by an old law dating back to 1813, which only stipulated that no children under ten years should be allowed to work underground. In April, 1884, however, a police regulation, which received Royal approval, was issued forbidding boys under twelve years and girls under fourteen years from working in mines. This of course is an improvement, though still an insufficient protection. The present adult population, however, has worked under the old law, and consequently experienced all its degrading, moral, and physical influences. The men and women are inevitably brutalised by unceasing toil, varied by the hardships of the semi-starvation that denotes periods of depression. The day's work varies from ten to fifteen hours; the wages, never high, have now fallen to at most 2*s.* 6*d.* a day for the fully qualified adult miner; but work is at present rarely obtained for more than four days in

seven, so that the head of the family only earns about 10*s.* a week; he is therefore anxious that his wife and children should increase this amount, and, though the youngest may not go down in the mine, they can work on the surface even at the tender age of seven. Living is cheaper in Belgium than in England, but the difference is not sufficient to enable the miners to live decently on such meagre wages. The women and children very generally work for 5*d.* a day, so that the financial advantage which is supposed to atone for the ruin of home life is very slender. If to these considerations we add the unwholesome nature of the toil in the damp and often poisonous atmosphere of coal-mines, it will not be difficult to explain the deplorable outburst of violence which has so recently shocked Europe. Where the Belgian workmen are well organised—as, for instance, at Ghent, where the light of education has elevated the toiling masses—there has been no violence, and the strikes, when they break out, are conducted in an orderly manner. But where there is no organisation, no education, and the population has degenerated physically through the exposure of women and children to excessive labour and insufficient food, reason loses its control over the body politic, and human beings are apt to act as herds of wild animals.

HYDROPHOBIA AND THE DOG REGULATIONS.

FRESH evidence of the value of the practice of muzzling dogs as a precautionary measure against hydrophobia comes from Vienna. The muzzling of dogs was practised there from 1879 to 1883, and during those years the number of cases of hydrophobia officially known was respectively 26, 23, 38, 5, and 2. In the year 1884 muzzling was abolished, and during that year 93 cases of bites from mad or suspected dogs are said to have been notified. It would be interesting, and would add to the value of the statement, if the number of cases of hydrophobia resulting from these bites were given. The very noticeable fall in the figures, however, from 38 in 1881 to 5 and 2 in the following two years bears witness to the usefulness of these precautionary measures. In Prussia by means of muzzling the number of cases of hydrophobia are said to have been reduced to a minimum. We trust that the new Chief Commissioner of Police, Sir Charles Warren, will in this matter continue the wise policy of his predecessor, for even were it proved beyond the shadow of a doubt that the bite of a rabid animal could be rendered incapable of conveying hydrophobia, or that the dire disease itself was a curable one, the clearing of the streets of London of ownerless and wandering curs would still be a boon to citizens, and an act of mercy and kindness to the wretched animals.

MARYLEBONE "DUST."

IF further evidence were required of the disgraceful condition of this parish with regard to the neglect of the sanitary authority to remove house refuse, it is to be found in the report of the last meeting of the Marylebone vestry, when a letter from the newly-appointed dust contractor was read. The contractor stated that when he entered upon his contract a few days ago, his foreman was given 273 complaints from householders of non-removal of dust, while the total number he had received in five days was 945; there was hardly a house which was not full of dust, and he was compelled to send out extra carts. A more discreditable condition it is difficult to imagine, and a more frivolous excuse—the death of the hall porter, who received complaints—it is impossible to conceive. That the most important part of the scavenging arrangements of a large and wealthy parish should be disorganised through the death of a person in this position is evidence of the failure of vestry government to undertake successfully any but the smallest duties. The vestry are themselves responsible for the removal of house refuse; they are permitted by law to depute the duty to other people, but they cannot acquit themselves of the responsibility, and the law which permits the scavenger to be fined for neglect should also make the vestry liable to penalty if they in their turn omit to exercise due supervision over his actions. The householder is absolutely in the power of this incapable body; he is not allowed under penalty to relieve his household of a standing danger by authorising any but the vestry's contractor to remove his dust, and if he should deposit it in the road he is liable to prosecution by the police; he is, moreover, compelled to pay heavy rates to the vestry, yet the only remedy he has against this body is that of complaint. The almost hopeless task of reconstituting the local authority so as to make the interests of the ratepayer superior to the interests of the contractor is too slow to be depended on, and under these circumstances we would gladly see householders agreeing to adopt the course which has been indicated by Mr. Cooke in his reply to Dr. Edis; but even this method will only assist individuals, and the only remedy for the parish as a whole worth the name is for the vestry not to trust to contractors, but to undertake the duty themselves.

"DEATH FROM IRRITANT POISONING."

SUCH was the verdict of a coroner's jury recently empanelled at Chesterton, Hunts, to inquire into the cause of death of two children aged six years and sixteen months respectively. From the evidence it appears that the deceased, their mother, and another child were taken suddenly ill after partaking of the same food. Dr. Stevenson of Guy's Hospital failed on analysis to detect any trace of poison, but he laid stress on the fact that a number of people were similarly and simultaneously affected. They had all eaten some food prepared from flour obtained by grinding some "dressed wheat," but there was no evidence to show that the dressing, usually arsenical, had caused the symptoms. The flour was dark in colour, and the starch granules were all formed, or had been deformed, by damp and subsequent drying. May it not have been that the wheat contained an admixture of seeds of some poisonous plant? We are not aware whether or not any other persons than those mentioned above partook of the food. This is an important point for consideration. In any case, the fact is worth noting that, with the aid of the highest skilled evidence, a coroner's jury have found that two children have died from irritant poisoning without any poison having been detected by chemical and physical tests.

A NOBLE ACT.

ONE of the latest, if not the latest, of the applicants for the benefits of M. Pasteur's assistance is Mr. Harris, a student of Charing-cross Hospital. Courage and self-devotion are virtues so frequently, we might indeed say so constantly, practised by members of our profession, that they come to be looked upon as commonplace and of every-day occurrence unless occasionally attention be drawn to them. Mr. Harris was taking luncheon at the restaurant of the Grand Hotel, when a dog which appeared affected with rabies attacked a lady there present. Mr. Harris seized the animal by the throat and got it safely out of the building, but in trying to twist his chain round him to render him incapable of inflicting injury, the young man, although the dog was muzzled, received a bite. He started on the next day with a friend to place himself under M. Pasteur's care, for the dog, being taken to the Battersea Home, died of rabies. We hope, whether by M. Pasteur's inoculation or by the percental immunity of bitten persons, Mr. Harris will not suffer for his bold and generous intervention

GAMBETTA'S BRAIN.

AT a recent meeting of the Anthropological Society of Paris a report by M.M. Duval and Chudzinski was read on the brain of M. Gambetta. The third frontal convolution was highly developed, the upper part of it being reduplicated. Reference was made to the brains of persons of low intelligence, and also to the prominence of Broca's convolution in the brains of Wulfert, the lawyer, and Huber, the philosopher, described by Rüdinger. In each of these latter *savants*, who were remarkable for their dialectical and rhetorical ability, the convolution was more wavy and complex than in ordinary brains, this being especially marked at the base, but there was no reduplication at the upper extremity of the convolution, as in Gambetta's. In the present case there were other indications that the brain was not that of an ordinary person. The right quadrate lobe was very complicated, and divided into two parts by a furrow branching off from the occipital fissure. Of these two parts, the inferior was divided into several little convolutions by a furrow with numerous stellate branches. The occipital lobe was very small, especially on the right side. Altogether the brain had a peculiarly fine appearance, due to its great and somewhat diagrammatic regularity, especially in the frontal region. The weight is to be discussed in a future paper.

PROFESSOR PETTIGREW, LL.D.

THE University of Glasgow has conferred the honorary degree of LL.D. on the Chandos Professor of Medicine of St. Andrews University, in recognition of his many labours in science and medicine. Few men of our day have more worthily won this honourable recognition than Dr. Pettigrew. His works on the "Valves of the Vascular System," on the "Muscular Tunics of the Heart," on the "Ganglia and Nerves of the Heart," and, above all, his researches on the various modes of flight, with his discovery of the now famous figure of 8 and wave theories of flying, place him amongst the most advanced scholars and original investigators of our day. We wish him long life for the enjoyment of this the latest of his many well-earned distinctions, and for the continued pursuit of his useful and valuable labours.

OVERCROWDING OF THE PROFESSION, AND MEDICAL ETHICS.

COMPLAINTS are frequently made in the Belgian medical journals of the overcrowded state of the profession in that kingdom, and of the frequency of serious breaches of medical etiquette to which this gives rise. It is stated that during the present year more than 200 students will be qualified and will have to seek to form practices for themselves, at the expense, of course, of established practitioners. In order to minimise the temptations to irregular and undignified methods of obtaining a *clientèle*, it is strongly urged that *cercles*, or local medical associations, should be formed wherever they do not already exist. It seems that a powerful and useful association has been for some time established in Verviers, and this is held up by *Le Scalpel*, one of the leading Belgian medical journals, as a suitable model on which other associations may be formed. Its rules, which have been largely borrowed from an older association at Antwerp, are as follows:—1. A practitioner summoned to a patient already under treatment cannot attend until the *confrère* previously in attendance has been informed. If this has not been done he must propose a consultation. 2. A practitioner called to a case of emergency occurring in a patient already under treatment should confine himself to giving such assistance as is necessary, and should leave a copy of his prescription for his *confrère*. 3. All the members of the association engage to act as substitutes for a *confrère* who is ill or on his holiday. This does not, however, hinder his making arrangements with some of them to attend his patients. 4. A practitioner absent or ill will notify to his *confrères* the time when he will resume his practice, and they will immediately send him a list of the patients they have attended, with any information they may consider desirable. 5. It is a point of honour with a practitioner not to retain patients belonging to a *confrère* who is ill or absent. 6. Another duty of the practitioner is to abstain from expressing an unfavourable opinion of, and from making unkind insinuations about, the treatment employed by a *confrère* who has preceded him. 7. A practitioner who succeeds another must not permit himself to accept a lower visiting fee than his predecessor. 8. The consultant cannot succeed the practitioner in charge until he has informed him in writing of the distinct wish declared by the patient that he should do so. 9. The practitioner should leave to the patient the choice of a consultant and accoucheur, and should not depart from this rule unless he is particularly requested by the family to name one himself. 10. The only practitioner with whom a consultation may be declined is one who is excluded from the Association.

HYSTERIA IN SOLDIERS.

DR. A. T. OZERETSKOVSKI describes in the Russian *Medical Review* a whole series of cases of hysteria occurring in soldiers, presenting nearly all the phenomena usually associated with this affection as it occurs in females—dumbness, deafness, deaf-mutism, various disturbances of vision and of general condition, spasms and paralyses, troubles connected with micturition, joint trouble, elevations of temperature, &c. The subsequent history of the cases in most instances left no doubt of the correctness of the diagnosis. Predisposition and heredity played a large part in the etiology, and in some instances there was injury or shock. Half the patients were recruits, which tends to show that the sudden change from domestic life and work to the arduous conditions of military service is not without effect on the nervous condition of the Russian soldier. The treatment of the hystero-epileptic cases was always unsuccessful, neither water, electricity, nor narcotics appearing to exert any influence over the frequency or severity of the attacks. The cure of the paralytic forms of the disease was successfully accomplished by means of exercise, gymnastics, &c.

THE LATE MR. FORSTER, M.P.

THE medical profession has lost by the death of Mr. W. E. Forster one of the few members of the House of Commons who have taken a broad and comprehensive view of the need of reform in the profession, both for its own sake and for that of the public. In the past he had proved himself a true friend, and we most sincerely regret that he has not been spared to witness in a future which as yet seems somewhat "dim and distant" the accomplishment of a truer and more satisfactory medical reform than appears probable at present.

THE GROCERS' COMPANY AND PATHOLOGICAL RESEARCH.

Two lectures will be given next week in the theatre of the University of London by gentlemen who have been engaged as "Research Scholars" of the Grocers' Company in pathological investigations. The first of these will be on Tuesday next, at 5.30 P.M., when Dr. Wooldridge will give an account of several important discoveries of great pathological interest as to the Coagulation of the Blood. The second lecture will be given on Thursday by Mr. Lingard on the Etiology of Typhoid Fever.

M. PASTEUR'S INOCULATIONS.

AT the extraordinary meeting on the 4th inst. of the Accademia Medica di Roma, under the presidency of Professor Guido Baccelli, the discussion on the new method in hydrophobia was resumed by Dr. Marchiafava, who was followed by Drs. Brunelli, Carruccio, Colasanti, Durante, Scalzi, Gualdi, Bastianelli, and Piermarini. Dr. Carruccio's contribution to the debate had the special merit of calling attention to the important experiments on the nature and treatment of hydrophobia conducted in 1810 by the able physician, Dr. Agostino Cappello of Tivoli. The proceedings came to a close with a resolution, unanimously voted, to the following effect:—"The Academy has decided to send to Paris a competent representative to study the Pasteur methods. With this object it empowers the President to ask for the necessary funds from the Ministries of the Interior and of Public Instruction, and from the Municipality." The next number of the *Bollettino* will contain a revised report of the discussion.

ARMY MEDICAL SCHOOL.

SIXTY surgeons on probation for the British Medical Service, and sixteen for the Indian Medical Service, met at Netley on the 1st inst. to attend the summer session of the Army Medical School. The introductory lecture was delivered on the following day by Professor Boyes Smith, who drew largely from his wide field of Indian experience for the subjects of his discourse. The talented lecturer, in the course of his address, paid a very eloquent tribute to the valuable services of his predecessor in the chair, Professor Maclean, in advancing tropical medicine, and dwelt with much feeling on the kind and ready help the Professor had afforded him when entering upon his new sphere of duty in the school. The large number of seventy-six surgeons sent to go through the present session has caused some difficulty in providing the necessary accommodation, and a certain proportion have been lodged in different houses in the adjoining village of Netley.

IMMORAL CONDITION OF THE LONDON STREETS.

THE committee appointed by the London Diocesan Conference to investigate and report on this important subject has not been able to add to the information already possessed, nor, so far as we can see, to make any useful suggestion. It is no reflection on the ability and energy of the committee to pronounce this judgment on the result of its labours. As a matter of fact, there is not much room for further inquiry, and there would seem to be little chance of good being done by directing attention to the subject. The committee is of opinion "that the continental system of a 'police des mœurs' would not commend itself to English feeling." Until something of this sort is adopted in England there is practically no hope of amendment.

UNQUALIFIED PRACTICE AT SHEFFIELD.

THE Sheffield Coroner has been making some very proper remarks on the subject of unqualified practice, in connexion with a case in which a boy was attended by a practitioner whom his parents thought qualified, but who was not so. This, he justly said, was attending people under a false pretence. It is, indeed, a very serious and culpable practice, which coroners do a great service in exposing. The coroner spoke in something like a tone of complaint that the Medical Society (*sic*) did not prosecute such cases, which he had communicated to the Society. But we should like to point out to the coroner that the duty of prosecuting an unqualified practitioner belongs really to the police or public authorities, and not to medical men. It is the public who suffer, and the prosecution by medical men is more or less invidious. We offer him, however, and all coroners who bring such cases to light, our hearty thanks.

CHANGES IN FOREIGN PROFESSORSHIPS.

DR. N. BOGOLYUBOFF, Extraordinary Professor of Surgery in the University of Kazan, has been appointed to the vacant Professorship of Surgery in the same university. Dr. Oscar Eversbusch, privat docent in Munich, has been appointed Professor of Ophthalmology in Erlangen. Dr. Kessel, privat docent in Gratz, has been appointed Professor of Otology in Jena. Dr. Grawitz, second assistant in the Berlin Pathological Institute, has been appointed Professor of Pathological Anatomy in Greifswald, in the place of Professor Grohe, whose resignation has been caused by ill health.

ROYAL UNIVERSITY OF IRELAND.

A MEETING of Convocation of this University was held on Tuesday last, the 6th inst., to elect a member of the Senate in the vacancy which had occurred by the expiration of Mr. Farrelly's term of office. Mr. Farrelly was opposed by Dr. Thomson, surgeon to the Richmond Hospital, the result of the election being that the latter gentleman was returned by a majority of three votes, the voting being 251 for Dr. Thomson, and 248 for Mr. Farrelly.

MR. SAVORY.

WE understand that Mr. Savory, President of the Royal College of Surgeons, has been offered a knighthood, an honour which he has declined to accept.

AN important paper was on Sunday last submitted to the Accademia dei Lincei of Rome by Professor Tommasi-Crudeli on "A Bacillus found in the Malarious Atmospheres of the Environs of Pola (in the Istrian Triangle)." The paper was accompanied with ten microscopic preparations by Dr. Schiavuzzi, and will shortly be published in the Academy's Transactions.

DR. OLIVER WENDELL HOLMES will leave Boston for Europe during the present month, and will pass the summer on this side of the Atlantic. It is just fifty years since he last visited Europe.

"A UNIVERSITY for Birmingham" is a project under discussion by the teaching staffs of Queen's and Mason Colleges.

Pharmacology and Therapeutics.

ANTIPYRIN IN OPHTHALMIC PRACTICE.

SOME observations by Khomyarkoff and L'voff (*vide* THE LANCET, Jan. 30th), tending to show the superiority of antipyrin over salicylate of soda in articular rheumatism and migraine, having induced a Russian ophthalmic surgeon, Dr. T. N. Katsauroff, to try it in cases of ciliary neuralgia and headache accompanying various eye diseases, he has published the results of this method of treatment in the *Vrach*. The patients comprised seventeen males and ten females, their ages varying from seventeen to seventy-five. Apart from the eye affection, all but three were free from disease. The antipyrin was always given in doses of a gramme (fifteen grains), and in every case appeared to be of distinct benefit in relieving the pain, a single dose being sufficient in fourteen cases, while in thirteen cases this had to be repeated, in two of them only (optic neuritis and scleritis) a third dose being found requisite. The author mentions that in nine cases where

operations for cataract had been performed and the enforced subsequent dorsal position proved so irksome as to induce headache, the antipyrin seemed particularly valuable, though two of them were complicated by iritis. The action of the drug in these cases was rapid, an improvement generally taking place in half an hour, and the pain being completely relieved in an hour. More or less satisfactory results were obtained in ciliary and cephalic pain accompanying different forms of keratitis, of which there were four cases; in corneal ulcers, of which there were three cases; and in glaucoma, of which there were ten cases. The drug seemed, however, to have less effect on a case of double neuritis, on two of atrophy of the optic nerve, and on one of scleritis. As observed by Khomyarkoff and L'voff, antipyrin proved very valuable in Dr. Katsauroff's hands in migraine, his case being of traumatic origin, a foreign body having penetrated the soft structures of the orbit. Previously to using antipyrin as described, Dr. Katsauroff had been in the habit of employing salicylate of soda in cases of headache accompanying eye diseases, but he found that it was often necessary to give it in such large doses as to cause singing in the ears, whereas no unpleasant effects were produced by antipyrin in any of his cases.

HELENIN IN DIPHTHERIA.

Dr. Juan Beltrán Obiol has communicated to *La Cronica Médica*, a paper on the subject of the successful treatment of diphtheria by means of helenin. He refers to a work by Dr. E. Pilatte, published in Paris and entitled "Recherches expérimentales sur le Bacile de la Tuberculose," in which it is stated that the three substances most destructive to cultivations of bacilli are, in the order of their activity—(1) Sulphuretted hydrogen; (2) corrosive sublimate; (3) helenin. The first two of these are of course out of the question for diphtheria. Helenin, therefore, is the only one which can be used for this purpose. Dr. Obiol is very particular about the helenin he employs, for he finds many specimens in the market which are exceedingly impure. When pure, he says, it is perfectly white and flocculent, like sulphate of quinine. It has an aromatic odour and a bitter aromatic taste. It is insoluble in water, and does not communicate to it any opalescence. It is very soluble in alcohol, and even more so in ether, the solutions being clear, colourless, and depositing no sediment. It is also soluble to the extent of 2 per cent. in oil of sweet almonds. Impure specimens are apt to be granular, heavy, yellowish, only slightly bitter, with a resinous odour, and they sometimes impart opalescence to water, and deposit a precipitate from their solutions in alcohol and ether. Another substance sold as helenin, but which is said to be a derivative of shalin and not to possess the antiseptic properties of helenin, is crystalline, only slightly soluble in ether and alcohol, and not at all in oil of sweet almonds. The pure drug is ensured by prescribing "helenin (Baeza)." The author's plan was to apply powdered camphor on the end of the finger to the diphtheritic patches, and then to paint them over with a solution of helenin in oil of sweet almonds. This was done at first every four hours, and quickly produced complete destruction of the false membrane. The drug was also given internally in doses of one grain and a half to children of six years of age, care being taken to administer the powder after the application, as the latter sometimes induced vomiting. The author had great success with this method of treatment, but he insists on the necessity of the local applications being made by the medical man himself as far as possible, and not left to the parents. He found that when he commenced the treatment on the first day of the disease, a single day was sufficient to effect a cure; when he commenced on the second day, two or three days were required; when on the third or fourth day, from six to nine days were needed; but when he did not see the patient till the fifth or sixth day the hope of effecting a cure was not very great. In his experience albuminuria did not occur. The only unpleasant action of helenin is its constipating effects, against which it is necessary to guard by giving laxatives.

BINOXIDE OF NITROGEN IN CHOLERA.

Most persons who have dabbled in electrical science are aware of the unpleasant fumes emanating from batteries containing nitric acid. These, however, are said by a Spanish Professor to be an admirable preservative against cholera, it being noticed that none of the workmen employed in an electrotype establishment in Madrid where they were subjected to the fumes of the oxides of nitrogen died from cholera during the epidemics of 1834, 1859, and 1885, and that only such of the workmen as were, absent frequently from the factory were attacked at all. He has also ascertained that liquids from dead bodies, on being treated with binoxide of nitrogen, soon lose their peculiar smell and remain quite free from micro-organisms. A French naval surgeon also has made use of the binoxide in thirty-five cases of cholera, with very satisfactory results. On the whole the Professor predicts that this substance will prove a most important general disinfectant, and a valuable means both of preventing and treating cholera.

SULPHATE OF THALLIN.

Dr. Britneff, having investigated the effect of sulphate of thallin in fifteen febrile cases—pneumonia, tuberculosis and typhus,—has come to a conclusion similar to that reported by Jaksch, Guttmann, and others—viz., that, though thallin is an active antipyretic, its effects are of short duration, the temperature generally rising soon afterwards with a rigor. He does not expect, therefore, that it will be found of much use in medicine.

ALKALOIDS OF LOBELIA.

Two alkaloids, one liquid and corresponding to lobeliine obtained from Lobelia inflata, the other solid, crystalline, soluble in chloroform, have been discovered by Dr. v. Rosen in Lobelia nicotianæfolia. He also detected the second alkaloid in Lobelia inflata. Lobeliine hydrochlorate, lobeliine sulphate, and the solid alkaloid correspond in their pharmacological characters, and resemble apomorphia in producing emesis.

"SACCHARINE."

An ill-chosen name for a very sweet coal-tar derivative, for the term has hitherto belonged to an altogether different body. "Saccharine" is benzoyl-sulphonic-imide, and can be artificially prepared. It has an intensely sweet taste, and the possibility of its displacing cane sugar makes it interesting; Dr. Stutzer of Bonn has asserted that the new principle is absolutely innocuous in the system, from which it is speedily eliminated by the urine.

TOXIC PROPERTIES OF SASSAFRAS.

An interesting paper by Dr. J. Bartlett of Chicago has been published in the *Pharmaceutical Journal* on the toxic properties of sassafras. It appears to have some resemblance to three familiar drugs—opium, strychnine, and ergot; for it has a narcotic and sudorific action; a property of inducing tetanic and clonic spasms, followed by paralysis and a probable stimulant effect on the muscle of the uterus.

FRANCISCEINE.

Francisceine, according to the *British and Colonial Druggist*, is proposed as the name of a new alkaloid which has just been extracted from the Brazilian manaca root, the produce of the Franciscea uniflora and certain other species. The principle in question has a very powerful purgative and diuretic action, and is also possessed of diaphoretic and emmenagogue properties.

AREKANE.

Arekane resembles nicotine and has been obtained by E. Bombelon from the "betel nut." It is a colourless volatile oily alkaloid, smelling like weak meat bouillon, and has a strongly alkaline reaction. It increases the secretion of the salivary glands, retards the pulse, and exercises a purgative action.

BOARDING-OUT OF PAUPER CHILDREN.—On the 6th inst., at a meeting at Exeter Hall, an Association was inaugurated having for its object the promotion, in concert with boards of guardians and others, the boarding out of orphan and deserted children; the formation of a link of communication between boards of guardians wishing to board out such children, and others included under the Local Government Board Order of 1870, and certified boarding-house committees willing to receive them; also the facilitating exchange of information between the several boarding-out committees, and an inquiry into the operation of the various systems of boarding out, and general co-operation in all measures for the promotion of boarding out, and for the welfare of the children thus provided for. Lord Cranbrook was elected president of the Association, and amongst the vice-presidents were the Archbishop of Canterbury, Cardinal Manning, and Mr. Goschen.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

King's Norton Rural District.—This district had in 1885 the low death-rate of 12·9 per 1000, the zymotic rate only reached 0·4, and the rate of deaths amongst infants under one year per 100 births was only 10·6. There was no death from small-pox, and the vaccination returns show that of 655 children due for vaccination only one remains outstanding. A few cases of diphtheria and of enteric fever occurred, and where these were associated with insanitary conditions remedial action was taken. Many improvements have been effected since the last report in the drainage and water-supply, and further works are still in progress. The sanitary hospital has well served its purpose of preventing the spread of disease, but it is only a temporary structure. The night-soil removal is very properly not imposed on the inhabitants; but being done by private contract, it is still not quite satisfactory. The disgusting practice of tipping the refuse into the road and then shovelling it into carts should be put down with a strong hand, and the authority had better adopt the model bye-laws on the prevention of nuisances which deal with this practice. But, on the whole, Mr. Hollinshead may be congratulated on the state of his district.

Swinton Urban District.—In this district scarlet fever became somewhat widely prevalent during the past year, and Mr. W. M. Jones points out how difficult it is to control such a disease when the first cases are kept secret from the sanitary authority. The Local Board of Health, by offering a fee for each case reported, afford an inducement to report every case; but yet this outbreak was allowed to get a firm hold on the affected locality without a single case being reported. This failure of a voluntary system of notification is by no means exceptional, and even the refusal of a single practitioner to comply with the wishes of the authority has more than once led to an entire break-down in the system. But in Swinton more is wanted than information as to spreading diseases—namely, some means for their isolation. When this is provided it will be time enough to call for compulsion in the matter of notification. Drainage works are still in progress, and the water-supply of the district is excellent.

Todmorden Urban District.—Mr. Charles Thorp recommends night scavenging. As to this we would suggest perusal of the model bye-law of the Local Government Board dealing with this subject, and of the comments on it in the annotated edition of the bye-laws. It is there pointed out that hitherto the construction of privies and receptacles for filth and refuse has very generally been such as to ensure rapid decomposition and consequent offensiveness of contents, and on this account it has been a frequent practice to require such structures to be emptied at night. This is, however, precisely the time not only when the scavengers themselves cannot see to do their work properly, but when they are least likely to be subjected to any proper supervision. Hence needlessly offensive operations are likely to be carried out. It is also the only time when persons desirous of absenting themselves during the process of scavenging are practically unable to do so. So also the period of sleep is that during which the human system is least able to resist the influence likely to result from the inhalation of noxious effluvia. And further, the more the conditions resulting from faulty structures are brought to light, the more likely are they to be remedied. For these and other reasons, scavenging under cover of darkness should be avoided. The death-rate for the district in 1885 was 17·3, and that from zymotic diseases 0·78, per 1000. The isolation hospital was useful in staying the spread of scarlet fever.

Towyn Urban District.—In a population of 3450, the death-rate for 1885 was 17·6 per 1000, which is not low for so small a population. Dr. Grosholz reduces it to 16·8 by deducting the deaths of prematurely born children; but obviously such a reduction makes the statistics valueless for the purposes of comparison, unless the same reduction were made everywhere else. No single case of sickness was heard of from either enteric fever or from diphtheria, but measles led to the temporary closing of the elementary schools. A curious epidemic of diarrhœa occurred in this district, beginning in Towyn, then creeping up the Dysynni valley to Aberganolwyn, and finally expending itself in Aberdovey. No single circumstance, such as water-supply &c., seems to have been common to those affected, and these were in many instances adults. Such outbreaks call for very searching investigation, but in this instance the actual cause was not made out. Towyn stands in great need of a proper system of sewerage and water-supply.

Aston Urban District.—The death-rate for this district has for some five years ranged from 12 to slightly over 14 per 1000, and stands now at the latter figure; but the infantile deaths are not so satisfactory, amounting as they do to 14 per year of every hundred children born. Scarlatina alone prevailed as an epidemic; and in this connexion it is noteworthy that the opening of an excellent hospital for infectious diseases has been one of the prominent features of the year. The sanitary authority have also determined to make an effort to secure early information as to cases needing isolation, by organising a system of voluntary notification at a fee of half-a-crown per case reported. Improvements in water-supply, sewer-ventilation, and methods of house-drainage are being effected, and the additional action needed to place the district in a satisfactory state is indicated by Dr. Bostock Hill in his report. Diagrams are also appended showing a new ventilating manhole, and details as to house-drainage; these cannot but be extremely useful to builders and to the public generally.

Llanelly Rural District.—In reference to a prevalence of scarlet fever, Dr. Raglan Thomas reports that in the Berwick hamlet much time was lost, by lack of information, in isolating the first attacks, and that the school authorities did not for some months comply with the request to close certain schools. It cannot be too widely known that under the revised Education Code the authorities of all schools coming within the provisions of that code have no alternative but to close schools on the instruction of the sanitary authority of the district, and also that, though appeal may be made to the Education Department, yet this does not enable the school officials to keep the schools open pending the appeal. The tabulated account of prevalent disease, its causes, extent, and the resulting sanitary action embodied in this report show that active work is maintained in this district, which in 1885 had a mortality at the rate of 15·33 per 1000. During the year, and with a view to any cholera emergency, a hospital hut was provided.

Taunton Urban and Rural Districts.—Considerable improvement in the water-supply of the *urban district* was effected during the year; but the private fittings, and notably the cisterns, call for further attention. Thus, Dr. Alford says that drinking-water is even drawn directly from a pipe discharging into the pan of a dirty closet. Closet supplies should always be drawn from separate cisterns, and if the service be a constant one no other cisterns are needed. The need for efficient ventilation and flushing of the town sewers has several times been commented on, especially in connexion with diphtheria, and we fear that even now the construction of the sewers remains faulty; if so, lodgment of contents is certain, and no ventilation and flushing should be regarded as superseding the necessity for reconstruction of such portions as are found to be faulty. The death-rate for Taunton reached 23·6 per 1000 during the past year, and the zymotic rate was no less than 3·7 per 1000. Fourteen deaths took place from small-pox, the disease prevailing in some dwellings built back-to-back in dark courts and alleys, with garbage, manure, filthy premises, and closets around; a state of things which needs the active interference of the sanitary authority. Measles and scarlet fever also prevailed. It is evident that there still remains ample scope for the labours of the energetic officer of health, who has already done much for Taunton. In the *rural district* the death-rate was also very high, reaching as it did over 18 per 1000; and the zymotic rate, too, was no less than 2·6 per 1000—small-pox, measles, and diphtheria being main contributors to it. In a number of places in this district there are old and imperfect sewers and drains, accompanied with stagnant and decomposing surface-slops. The water-supply also remains far from satisfactory, shallow wells being the rule, and these are often in most dangerous proximity to privies and piggeries. The past history of these two districts in relation to diphtheria should have led before this to more intelligent action, with a view to remedial measures being adopted on a wide and comprehensive scale. Many nuisances are well looked after, good advice is given, and the sanitary hospital works well. But

more than this is needed for the due protection of life and health.

Windsor Urban District.—Dr. Casey reports that the death-rate for this district during 1885 was 18·6 per 1000 on a population of 12,493, a fatal epidemic of measles having helped to increase the mortality. It is, however, satisfactory to note that a single death from enteric fever was the only one that had taken place from that cause during a period of five years. In connexion with the work of the year it is stated that samples from eight wells were submitted for analysis and condemned, and that twenty-four houses were, at the instance of the authority, furnished with a supply from the mains. It is astounding to think of the ignorance of the owners of "private" wells which are sunk in the soil of this ancient borough, honeycombed as it has been in the past with cesspools leaking on all sides; but it remains a fact that people in Windsor still draw their water from the same source as that into which their ancestors poured their filth. Only two houses were closed during the year, and the report dealing with this question points to the evils connected with leasehold tenure, a lessee being naturally most unwilling to go to any expense in improving a property in which he will in a few years lose all interest. This is true, but leases can hardly be abolished, and sanitary authorities are constituted in order to see that persons having a financial interest—however limited—in property shall not so use, and profit by, that property as to prejudice the public health.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6052 births and 3862 deaths were registered during the week ending April 3rd. The annual death-rate in these towns, which had been equal to 29·3 and 26·4 per 1000 in the preceding two weeks, further declined last week to 22·2. During the thirteen weeks ending last Saturday the death-rate in these towns averaged 24·4 per 1000, and precisely corresponded with the mean rate in the thirteen corresponding weeks of the ten years 1876-85. The lowest rates in these towns last week were 12·4 in Wolverhampton, 15·6 in Sunderland, 15·9 in Norwich, and 18·8 in Hull. The rates in the other towns ranged upwards to 27·9 in Plymouth, 28·7 in Brighton, 28·8 in Bolton, and 31·4 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 430,427, and 406 in the previous three weeks, further declined last week to 359; they included 157 from whooping-cough, 97 from measles, 36 from diarrhœa, 30 from "fever" (principally enteric), 19 from scarlet fever, 19 from diphtheria, and only 1 from small-pox. No death from any of these zymotic diseases was recorded last week in Norwich, Wolverhampton, or Huddersfield; whereas they caused the highest death-rates in Bolton, Birmingham, and Blackburn. The greatest mortality from whooping-cough occurred in Newcastle-upon-Tyne, London, Portsmouth, and Birkenhead; from measles in Portsmouth, Oldham, Birmingham, Plymouth, and Blackburn; and from "fever" in Preston. The 19 deaths from diphtheria in the twenty-eight towns included 8 in London, 2 in Bristol, and 2 in Manchester. Small-pox caused 1 death in Liverpool, and not one in London and its outer ring, or in any of the twenty-six other large English towns. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 7 and 8 on the preceding two Saturdays, had further increased to 11 at the end of last week; 4 cases were admitted to these hospitals during the week, against 2 and 5 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 917 and 710 in the preceding two weeks, further declined last week to 506, and were 30 below the corrected weekly average. The causes of 83, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Brighton, Leicester, Plymouth, Derby, and Huddersfield. The largest proportions of uncertified deaths were registered in Oldham, Sheffield, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 27·9 and 24·7 per 1000 in the preceding two weeks, further declined to 21·6 in the week ending April 3rd, and was 0·6 below the mean rate during the same week in the twenty-eight English towns. The rates in the Scotch towns last week ranged from 11·5 and 14·1 in Perth and Leith, to 22·5 in Paisley and 25·5 in Glasgow. The 534 deaths in the eight towns showed a further decline of 75 from the numbers returned in the preceding two weeks, and included 14 which were referred to whooping-cough, 11 to diarrhœa, 5 to "fever" (typhus, enteric, or simple), 5 to diphtheria, 4 to scarlet fever, 4 to measles, and 3 to small-pox; in all, 46 deaths resulted from these principal zymotic diseases, against 46 and 62 in the preceding two weeks. These 46 deaths were equal to an annual rate of 1·9 per 1000, which was 0·2 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 20, 14, and 29 in the previous three weeks, declined again last week to 14, of which 12 occurred in Glasgow. The 11 deaths attributed to diarrhœa corresponded with the number in the previous week, but were 6 above the number in the corresponding week of last year. The 5 deaths from "fever" exceeded the number in the previous week by 1, and included 2 in Edinburgh and 2 in Paisley. The deaths from diphtheria, which had been but 1 in each of the previous two weeks, rose last week to 5, of which 2 occurred in Aberdeen. The 4 fatal cases of scarlet fever were returned in Glasgow, and the 4 of measles in Edinburgh. The 3 deaths referred to small-pox included 2 in Leith and 1 (certified as chicken-pox) in Aberdeen. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 204 and 148 in the preceding two weeks, further declined last week to 134, but were 4 above the number returned in the corresponding week of last year. The causes of 80, or 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 40·5 and 34·6 per 1000 in the preceding two weeks, further declined to 34·4 in the week ending April 3rd. During the thirteen weeks ending last Saturday the death-rate in the city averaged no less than 33·5 per 1000; the mean rate during the same period did not exceed 24·8 in London and 20·0 in Edinburgh. The 233 deaths in Dublin last week were within one of the number returned in the previous week, and included 15 which were referred to the principal zymotic diseases, against 19, 13, and 18 in the previous three weeks; 6 resulted from whooping-cough, 5 from "fever" (typhus, enteric, or simple), 3 from scarlet fever, 1 from diarrhœa, and not one either from small-pox, measles, or diphtheria. These 15 deaths were equal to an annual rate of 2·2 per 1000, the rates from the same diseases being 2·3 in London and 1·4 in Edinburgh. The fatal cases of whooping-cough, which had been 6 and 12 in the preceding two weeks, declined again last week to 6. The deaths referred to "fever," on the other hand, rose again to 5, from 6 and 1 in the previous two weeks. The 3 fatal cases of scarlet fever showed an increase upon recent weekly numbers. Two inquest cases and 3 deaths from violence were registered; and 74, or nearly a third of the deaths, were recorded in public institutions. The deaths of infants were more numerous than in the previous week, whereas those of elderly persons showed a marked decline from recent weekly numbers. The causes of 39, or nearly 17 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—Coldstream Guards: Surgeon Robert Hippisley Cox, Medical Staff, to be Surgeon, vice J. Magill, M.D., promoted.

ARMY MEDICAL STAFF.—Surgeon-Major Hubert Rothwell Greene, from the Seconded List, to be Surgeon-Major. The undermentioned Surgeons-Major are granted retired pay, with the honorary rank of Brigade Surgeon: Hubert Rothwell Greene, John Fitzgerald Brodie, Vivian Wearne.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon William Middleton Power has been placed on the Retired List of his rank.

The undermentioned surgeons have been promoted to the

rank of Staff Surgeon in Her Majesty's fleet: William Henry Patterson, Everard Home Saunders, Henry Anthony Wills Richardson, James Alexander Collot, Edward Wentworth Luther, Robert Bentham, Nicholas Crawford Ross, William Edward Bennett, James William Hambly Hawton, and Edward Ross Mulock.

The following appointments have been made:—Staff Surgeons J. B. Drew and T. O'Sullivan, to the *President*, additional, for service at the Royal Victoria Yard, Deptford; Fleet Surgeon G. Maclean, to the *Alexandra;* Surgeon J. Crowley, to the *Excellent;* Surgeon H. L. Crocker, to the Royal Naval Hospital, Chatham; and Surgeon J. J. Walsh, to the *Excellent*, additional.

YEOMANRY CAVALRY.—Lancashire Hussars: Surgeon E. H. Beaman, whose resignation has already been notified, is granted the honorary rank of Surgeon-Major, and is permitted to wear the uniform of the regiment on his retirement.

ARTILLERY VOLUNTEERS.—1st Argyll and Bute: J. Hunter and W. Hunter are granted the honorary rank of Surgeon-Major.—1st Devonshire: Surgeon G. Pycroft is granted the honorary rank of Surgeon-Major.—1st Glamorganshire: Surgeon F. W. Granger is granted the honorary rank of Surgeon-Major.—1st Lanarkshire: Surgeon J. Provan, M.D., is granted the honorary rank of Surgeon-Major.—2nd East Riding of Yorkshire: Acting Surgeon F. R. Chapman resigns his appointment.—1st West Riding of Yorkshire: Surgeon J. W. Scarth to be granted the honorary rank of Surgeon-Major.

RIFLE VOLUNTEERS.—1st Ayrshire: Surgeon J. McAlister is granted the honorary rank of Surgeon-Major.—5th Cheshire: Surgeon S. H. Munro, M.D., is granted the honorary rank of Surgeon-Major.—2nd Derbyshire: Surgeon W. Milligan is granted the honorary rank of Surgeon-Major.—2nd Forfar (Angus): J. Mackie, jun., M.D., W. F. Murray, J. K. Anderson, M.D., and G. P. Alexander, are granted the honorary rank of Surgeon-Major.—1st Lanarkshire: Surgeon A. K. Irvine, M.D., is granted the honorary rank of Surgeon-Major.—3rd Lanarkshire: Surgeon J. Dunlop, M.B., is granted the honorary rank of Surgeon-Major.—4th Lanarkshire (Glasgow 1st Northern): Surgeon R. Smart, M.D., is granted the honorary rank of Surgeon-Major.—6th Lanarkshire: Surgeon D. Maclean, M.D., is granted the honorary rank of Surgeon-Major.—4th Lancashire: Surgeon E. H. Roe is granted the honorary rank of Surgeon-Major.—1st Shropshire: Job Edwin Brooks, Gent., to be Acting Surgeon.—3rd Volunteer Battalion (the South Wales Borderers): John William Davies, Gent., to be Acting Surgeon.—6th (West) Suffolk: Harry Charles Costello Shaw, Gent., to be Acting Surgeon.—1st West Riding of Yorkshire: George Richard Green, Gent., to be Acting Surgeon.—2nd Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Surgeon J. E. Foster is granted the honorary rank of Surgeon-Major.

Correspondence.

"Audi alteram partem."

SUPRA-PUBIC *v.* PERINEAL LITHOTOMY.

To the Editor of THE LANCET.

SIR,—As circumstances prevented me at the last moment taking part in the discussion of the above subject at the Medico-Chirurgical Society, I shall feel obliged, having regard to the great importance of the subject, if you will kindly allow me space to express the views I intended giving utterance to after reading the abstracts of the cases which preceded the discussion.

In Mr. Rivington's case the importance of providing for drainage of the bladder after lithotomy, where the stone is large, is clearly shown; and though terminating fatally, it seems to me to afford some evidence of the value of the perineal incision, in addition to the supra-pubic, as providing a suitable outlet in cases where the floor of the bladder is much depressed by what has been lodging there. Though I cannot come to the same conclusion as Mr. Jacobson that the supra-pubic operation is likely to find much more favour in the future than it has in the past, I think with him that probably some surgeons who have only rarely to operate for stone—or, I would add, who have not met with much success with the lateral operation—may find it easier and safer than the latter proceeding. Mr. Barwell, in one of his cases, illustrates what I believe to be the best practice in females where the stone cannot be removed by lithotrity and evacuation—namely, the adoption of the supra-pubic method in preference to dilatation of the urethra and extraction, as the latter is so frequently followed by incontinence of urine. Passing, however, from these interesting examples to the general question as to the position which supra-pubic lithotomy should hold in relation to the treatment of stone, I think there is a good deal to be said. My personal experience of supra-pubic lithotomy has been so limited that I should not venture to speak of it did I not feel that, though small, it related to the consideration of the whole subject of removing those stones from the bladder which lithotrity could not be made to include. On the other hand, my experience of lateral lithotomy has not only been considerable, but has given results which make me view with some apprehension the proposal to revive, with what seems to me but little discrimination, the supra-pubic operation. Whilst admitting all the advantages claimed for Petersen's method, I would still limit its performance to those cases beyond the reach of lithotrity, where the relations of the stone to the pubic arch were such as to render extraction by this way without damage to the adjacent parts obviously hazardous, and in the female to those cases where Bigelow's proceeding was inapplicable. I do not think it possible to define closer than this.

My reasons for urging that the supra-pubic operation should be reserved for those stones which in our individual judgment appear to be beyond removal, with safety to the surrounding parts, by the perineal method, partly arise from a consideration of some of the conditions under which Petersen's operation may be performed, and the experience we possess already relative to the performance of lateral lithotomy as at present practised. Of all the contingencies an operator has to calculate upon and provide against, the most embarrassing is the consciousness that he may find such an anatomical disposition of the parts as to render the completion of the contemplated proceeding impossible. The reflection of the peritoneum has been found so low down as to render it impossible to open the bladder without entering the peritoneal cavity.[1] I cannot recall any contingency of this nature which might not be provided against beforehand that has ever led to the lateral operation having to be abandoned. Again, I do not think that Petersen's operation is entirely without special dangers other than those connected with an abnormal reflexion of the peritoneum. Our experience of Petersen's method has so far been comparatively limited. Let me illustrate my point in another way. A patient with a stricture and a distended bladder was placed on the operating table of Bellevue Hospital for the purpose of having his stricture relieved.[2] Whilst struggling under ether the abdominal tumour suddenly disappeared, and the former area of dulness became tympanitic. At a post-mortem examination the bladder was found ruptured, without ulceration or other alteration. No doubt the distension in this case was considerable, as two quarts and a half of bloody fluid were found in the abdomen. When, however, we consider the condition of distension, so far as both the bladder and rectum are concerned, in Petersen's proceeding, I cannot think, from the descriptions I have read, that we are entirely free from the possibility of such an accident occurring in the case of an atonic or weakened bladder which might have not been realised beforehand.

Passing now to our experience of lateral lithotomy, let us see for a moment what is our position. In young male children a well-executed lateral lithotomy may be regarded as an extremely safe operation. Many surgeons I could mention have practised it a considerable number of times without a fatal result. It leaves no permanent weakness or imperfection behind. Why should we wish to change it other than on the somewhat questionable ground that to some the change may prove more convenient? Passing to the adult, we are left in the present day, thanks to the progress lithotrity has made, with a small residuum of cases which this operation cannot cover. And this residuum is practically made up of three groups of cases: (1) cases where the stones are too large to come out except through the abdomen; (2) cases of stone where the condition of the prostate is such as to demand some special attention;

[1] Polaillon: THE LANCET, Jan. 30th, 1886. Autal: Medical Chronicle, March, 1886.

[2] Dr. Cruise: New York Medical Record, Aug. 1st, 1881.

(3) cases of stone complicated with diseased or distorted bladders requiring drainage. I do not think that examples of these three conditions will be wanting in the practice of most surgeons. Of these three groups the first is provided for by supra-pubic cystotomy. I have already brought before the Society[3] two cases illustrating the second class, where patients were relieved not only of the symptoms which stone caused, but also of those produced by these large growths. Both patients are now alive and well, though several years have elapsed since these operations were performed. I have recently laid before the profession a record of cases[4] where I have been able to treat advantageously this frequent complication of stone in the bladder. Passing to the third class of cases, where the bladder requires not only the removal of the stone but draining, I would illustrate this in the following way. During the last two years two patients came under my care, one who had undergone the crushing operation twice and the other thrice, at comparatively short intervals of time. In both the operation could only be regarded as partially successful; both seemed to me to suffer almost as much without stones in their bladders as they did with. I cut and drained both, and the patients are now, I believe, and have been since the operation, perfectly well. Though lithotrity was successful in each, lithotomy was more so. I cannot, under the circumstances referred to in the last two groups of cases, admit that I could have obtained equally satisfactory results by an opening made into the bladder above the pubes.

Permit me to say, in conclusion, that we have, I think, sufficient evidence to show that the last few years have not been uneventful in the history of perineal lithotomy. We have learnt to define pretty accurately what cases are best met by crushing and what by cutting. We have improved our means of arresting any hæmorrhage that may follow the latter proceeding. Means have been methodically and successfully introduced for dealing with some states of the large prostate when it complicates stone. We have recognised the importance of bladder drainage as a necessary part of the after-treatment of some cases of lithotomy, and suitable appliances have been introduced and accepted for this purpose; and, further, the essential details of Listerism have been applied to these operations. Instead of aiming to change our ground and to substitute an abdominal for a perineal section, save under exceptional circumstances, I think we shall find it more advantageous if we endeavour to add further improvements in the directions I have ventured to indicate, in the perfecting of an operation which, of all others, so entirely depends on the precision and dexterity with which it is executed.

I remain, Sir, yours obediently,

Liverpool, April 2nd, 1886. REGINALD HARRISON.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Jan. 30th, 1886, there is reference made to a case of attempted supra-pubic lithotomy by M. Polaillon, which was abandoned on account of anomalous distribution of the peritoneum. It is difficult to understand why a supra-pubic operation was attempted to remove a "stone measuring in circumference four centimetres by two"; stranger yet that it should have been abandoned through dread of wounding the peritoneum; as this may occur without disaster, the following case of epi-cystotomy will illustrate.

John M——, a native of Ireland, aged seventy-three, was admitted to the Buffalo Hospital of the Sisters of Charity on Sept. 22nd, 1884, with a history of symptoms of stone for the past two years. During the three months prior to admission to the hospital he had suffered intense pain, with cystitis. Examination with the sound revealed the presence of stone in the bladder, greatly enlarged prostate, and subacute cystitis.

On Sept. 23rd, 1884, in the presence of a large number of medical gentlemen, and with the assistance of my colleagues, Professors Cronyn and Stockton and Drs. Mickle and Clark, I performed epi-cystotomy. An effort was made to use Petersen's method of throwing the bladder upwards and forwards by introducing a rubber bag into the rectum and inflating it; but owing to an imperfect apparatus and the excessively enlarged prostate, the attempt was abandoned. The bladder was then injected with about six ounces of a solution of boro-glyceride (all it would hold). The patient took the anæsthetic (ether) badly. There was a constant convulsive movement of the abdominal muscles, and it seemed impossible to produce relaxation. This greatly complicated the operation, and partly accounts for the accident which occurred. The bladder was exposed by the usual incision, and seized by a pair of tissue forceps, which, by the way, are inferior for their purpose to the tenaculum. It was then incised, and a mulberry calculus, 1¾ in. in long diameter by 1 in. transversely, extracted with the thumb and forefinger. After washing the bladder out with mercuric bichloride solution (1 in 1000), a short rubber drainage-tube was inserted at the lower angle of the wound. The abdominal incision was then closed by silver-wire sutures, with the exception of about half an inch left open for drainage.

About fifteen minutes after the patient had been removed to his bed I was summoned in haste, and found, on reaching him, that he had vomited while recovering from the ether, and that a coil of small intestine about the size of the fist protruded from the wound. The stitches were rapidly cut, the intestine completely returned, and by means of a perineum needle four silver wire sutures were carried through the abdominal walls and the anterior wall of the bladder; then, anchoring the bladder to the abdominal wall, a soft rubber catheter was placed in the bladder per urethram, and a pad of gauze containing wood flour mixed with mercuric bichloride and naphthalin was applied over the wound.

Sept. 25th (8 P.M.): Temperature 101°; some pain in abdomen. Ordered one grain of powdered opium and two grains of camphor powder every four hours.—26th: Slept fairly; temperature 100°; bloody urine flowing freely through the catheter.—27th: Temperature normal; patient feeling well; urine clearer.—28th: Temperature normal; slept well; slight escape of very ammoniacal urine through wound; bladder washed out with boro-glyceride solution.—30th: Bowels fairly moved in response to a cathartic.—Oct. 1st.: Temperature normal; bladder washed out with mercuric bichloride solution (1 in 1000). From this time the patient steadily improved, the urine becoming clearer, and the wound healing completely. He was discharged cured on Oct. 23rd, 1884. Three weeks later he reported himself to Dr. Mickle at the Emergency Hospital, and stated that he was "quite well, and had no further difficulty with his urinary organs."

Notwithstanding the peritoneum was wounded during the operation, the patient made an excellent recovery, without peritonitis or any other untoward symptom. From his advanced age and the complications above mentioned, this case was fairly a crucial test of the operation of epi-cystotomy, and goes far in support of the claim I have made for it in a previous paper. I suggest that an effective method in dealing with such an exceptional case as reported by M. Polaillon would be to pass through the abdominal wall and the anterior wall of the bladder a long steel pin, thus fastening the peritoneal surface of the bladder to that of the abdominal parietes, and, either before or after incising the peritoneum, to stitch with fine catgut sutures the vesical layer of peritoneum to that lining the abdominal walls, in this manner preventing the escape of urine into the peritoneal cavity. The fact that the bladder in M. Polaillon's case was diseased would suggest the propriety of inserting a tube into the bladder at the lower portion of the wound for thorough drainage. The impunity with which exploratory incisions are now made in cases of abdominal tumours lends strength to this method.

The advantages of the supra-pubic operation I had the honour to point out in a paper read before the American Surgical Association at its meeting in Washington, D.C., held April 30th to May 3rd, 1884, in which I made use of the following language: "As regards the relative merits of epi-cystotomy and litholapaxy, recently discussed by Dittel, in properly selected cases and in experienced and skilful hands, the former will probably maintain its present position, but my own opinion is that supra-pubic cystotomy will prove by far the safer operation in the hands of the average surgeon." A more extensive experience in this class of cases has but served to confirm me in this position. It is gratifying to find my views endorsed by so eminent an authority as Sir Henry Thompson in THE LANCET for July 25th, 1885, more than a year afterwards, where he says: "The problem, then, left for solution is what is the best cutting operation for hard calculi (urates and oxalates) which weigh from about two ounces and up-

[3] Med.-Chir. Trans., vol. lxv. [4] THE LANCET, Jan. 16th, 1886.

wards, as well as for those not quite so large, which are so peculiar in form (as occasionally, but very rarely, happens) that the lithotrite fails to grasp or retain them? I think there is no doubt about the answer—viz., that it is the suprapubic and not the lateral position." And again: "Finally, I think I am quite justified in believing that unless the operator has had a large experience of lithotrity (and there are not many of whom this can be affirmed), the high operation would generally be a safer proceeding than crushing for a calculus which is hard and much above an ounce in weight." In regard to the danger of impotence from peritoneal section, to which I alluded in my paper above mentioned, I am permitted to quote the following extract from a private letter received from my friend, Dr. A. H. Haemstadt of Pottsville, Pa.—a lithotomist of large experience: "Your eleventh accident—impotence—is well put; only one of eighteen whom I cut as boys, grown to manhood and married, has had issue as far as I can learn."

One of the strongest arguments in favour of the suprapubic operation is that it avoids all interference with the *genital* organs, thus preventing the so frequent reflex disturbance of the nervous system accompanying the introduction of instruments through the urethra—a practical point to which, I believe, I was the first to publicly invite attention. I am, Sir, yours truly,

W. G. TREMAINE, M.D.,
Major and Surgeon, U.S. Army; Surgeon-in-Chief, Buffalo Sisters' Hospital, &c.

Buffalo, N.Y., Feb. 15th, 1886.

PASTEUR'S EXPERIMENT.

To the Editor of THE LANCET.

SIR,—In your leader of March 20th, and in the special article in THE LANCET of last week, which are devoted to a description of the method by which M. Pasteur secures and uses the protective virus, the attention of the medical profession is intelligently drawn to a subject of great interest and importance. For the moment M. Pasteur is concerned with hydrophobia alone, but the issues presented to the mind of anyone who has become practically acquainted with the inception and progression of disease are many and far-reaching. It may be said of all disease that the period of active pathological change is preceded by a period of passive fermentation, which prepares the whole animal structure for the consequent and more perceptible morbid process. At present, however, this period of latency in the majority of diseases cannot be exactly determined, and, indeed, the conditions and circumstances of disease, regarded as they are at present under the somewhat uncertain light of our knowledge, are strangely various and bewildering. Perhaps, if the jaded general practitioner of medicine, careful and troubled like Martha about many things, were to express his mind freely concerning the mysterious vagaries of his many-faced adversary, Virgil's unkind description of the gentler sex—

"Varium et mutabile semper femina"—

would, with a trifling alteration, suit his purpose best. There are, however, certain diseases in which the period of incubation can be exactly determined, and in other cases by careful and long-continued observation the scientific physician has arrived at conclusions which are found to be erroneous only in exceptional cases. M. Pasteur proposes to deal with a disease during its incubation period, and has selected a disease which is "only conveyed by direct contagion, so that the date of the introduction of the poison into the system can be fixed with precision." (THE LANCET, March 20th). At present M. Pasteur proposes merely to inoculate persons who have been bitten by mad dogs, but, as you say in the leader from which I have already made a quotation, "in process of time it may become the fashion to inoculate with the mitigated virus in order to give protection against the possible bites of mad dogs, but at present there seems little likelihood of this practice being established, nor, on the whole, is it desirable." The practice would not, in my opinion, be desirable, because hydrophobia is a disease of the lower animals, and is only occasionally transferred from them to man; but if M. Pasteur succeed in his experiment, it might become desirable that all dogs should be protected by inoculation. By his brilliant discovery Jenner drove out from the midst of the people a terrible and deeply-rooted disease. In like manner M. Pasteur may succeed in removing from the animal world the disease against which his scientific labours have been for some time directed. If success should attend his efforts—and at present there is little reason for anticipating failure—a great advance will have been made in the preventive treatment of disease. I may be too sanguine in expressing my belief that the experiment which is proceeding at Paris is a swift approach towards the clear noonday of scientific medicine of which Jenner's discovery is the brilliant dawn. There is certainly ample reason to be found for the belief in the success which has attended the theory of vaccination in practice, and in the patient and questioning industry of the great French pathologist and chemist. He is indeed a worthy successor of his countryman, Lavoisier, who, dragged down with many others into the ruthless whirlpool of the first Revolution, asked for a fortnight more of life in which to finish an experiment.

In speaking of M. Pasteur and his experiment, one is led naturally enough to consider the manner in which it has been received by those who are opposed to science on purely sentimental grounds, and by those who, with varying degrees of responsibility, take part in the government of the country. In a recent and very admirable work Sir Henry Sumner Maine arrives at the somewhat sad conclusion that science will suffer under a government by the people. I have mentioned Lavoisier and his pathetic request, but, as Carlyle says, "the Republic had no use for experiments," and so the fortnight more of life was denied to the chemist. We have not yet descended to the depth of moral and social dissolution to which the French people were dragged by Robespierre, Marat, and company, but we are hurrying on at a startling pace, and only the other day, at the call of a shrill and shallow sentiment which would send all science to the winds, the Contagious Diseases Acts were removed from the Statute Book. "The day of checks and counterpoises is over," exclaimed Mr. Labouchere some time ago in the *Fortnightly Review*, and the present House of Commons is showing that there is some truth in the exclamation. "Government by the people for the people" (this is the formula I think) will mean a paralysis of scientific effort. True science can never be popular in the ordinary acceptation of the word. Unlike Radicalism, it does not promise well on the surface, and does not leap from a chaos of improbable and indefinite premisses to time-serving and popular conclusions. The best and most useful part of scientific work is hidden from the notice of the multitude. The days of earnest endeavour towards the practical attainment of a great scientific end are unheard of by the busy throng who thrive unthinkingly upon the discoveries that the votaries of science have made. At present we may congratulate ourselves that we are yet some distance from a government by the people, and rejoice in the fact that in spite of the absorbing Irish problem, a Governmental commission is to be appointed to investigate into the subject upon which M. Pasteur is experimenting. The names which you mention are of themselves sufficient to satisfy those interested that the work will be done in a thoroughly efficient fashion. Scientific investigation of the severest kind must always be applied to every discovery of moment, and in the instance of M. Pasteur's experiment the discovery is of the first importance. For my part, I believe that investigation will but prove the truth of the theory by making sure its practical success.

I am, Sir, yours truly,

Glasgow, March 30th, 1886. ROBERT MACPHERSON.

HEALTH-RESORTS FOR PHTHISICAL PATIENTS.

To the Editor of THE LANCET.

SIR,—I read with much pleasure in your issue of March 13th a leading article on Health-resorts for Phthisis. My purpose in writing now is to endorse, with what weight an experience of twenty-two years' practice in Sydney may carry, the truth of your remarks, in so far as they relate to Australia. I have frequently expressed to my medical friends here, and in words almost identical with your own, the great importance of warning consumptive patients, when contemplating removal to New South Wales, against taking up their residence in Sydney or any other place upon the eastern seaboard. During nine months of the year the atmosphere is warm and moist, and the surroundings highly detrimental to the phthisical invalid. Tubercular deposit rapidly undergoes softening, and night sweats, loss

of flesh and appetite, with sometimes diarrhœa, ensue. How different, as a rule, the progress of the patient who has been wisely advised to betake himself to the great inland plains, where the air is dry and warm. Living in a town, or, far better, on a sheep or cattle station so situated, he gains flesh, his appetite returns, night sweats cease, and life becomes enjoyable. My case-books afford abundant evidence of cures so brought about. Even when cure has not been effected life has been greatly prolonged. To a young and, as is so often found in the phthisical, a highly intelligent mind continuous absence from the metropolitan centres of southern civilisation is often a sore trial and has a depressing effect. Fortunately my experience enables me to say that an exception to the rule of unbroken residence on the inland plains may be made during the winter quarter. At this season the climate in Sydney is dry and bracing, the very opposite condition to that which exists during the other nine months. I have been in the habit, therefore, of permitting my consumptive patients to visit Sydney during the winter, and when the privilege has not been abused the change of scene and distraction from their own sensations have proved advantageous to them. With this exception, however, it cannot be too strongly urged that phthisical patients should reside permanently upon the inland plains, which are at an elevation of from two to three thousand feet above the sea level.

I am, Sir, yours faithfully,

Sydenham-hill, March 30th, 1886. P. SYDNEY JONES.

UNUSUALLY PROLONGED PERIOD OF INCUBATION OF SMALL-POX.

To the Editor of THE LANCET.

SIR,—The following case of exceptionally long incubation of small-pox appears worthy to be put on record. The proof that the patient was but once exposed to infection, and that only for two hours and a half, is about as strong as available proof on such a matter is likely to be, inasmuch as, until the occurrence of the case in question, there has been no small-pox in Newcastle for above half a year, the last case before this having been notified in July, 1885; neither has the patient been anywhere outside of Newcastle, or in known communication with any infected person except one, or with any other person coming from an infected place. The circumstances are:—

Mrs. A. B—— first began to feel unwell on Friday, the 26th of March. A very sparse eruption of small-pox papules appeared on the 29th (fourth day of illness). On March 6th the patient's brother, T. S——, was discharged from a small-pox hospital upwards of thirty miles distant from here, and came to Newcastle to the house of his sister on the same day. He remained with her for two hours and a half, when he went away by the north train, leaving behind him none of his clothing or other belongings. No communication between the two has taken place since. There is therefore, good reason to believe that in this case the period of incubation extended from the 6th to the 26th of March inclusive, or in all twenty-one days. The patient bears faint vaccination cicatrices from infancy, equal in area to about six ordinary vaccine vesicles. It would be interesting to know how far the incubative stage has been affected by these.—I am, Sir, yours obediently,

HENRY E. ARMSTRONG,
Medical Officer of Health, Medical Supt., Newcastle Small-pox Hospital, &c.

Newcastle-on-Tyne, April 6th, 1886.

BIRMINGHAM.

(From our own Correspondent.)

THE MEDICAL INSTITUTE.

THE annual meeting of the Medical Institute was held on the 25th ult., under the presidency of Mr. J. S. Gamgee. A portrait of the late Dr. Russell was presented by Mrs. Russell, and accepted with much satisfaction as a memento of the esteem with which the high personal character and professional attainments of Dr. Russell are remembered by the members of the institute. The report shows that the library is increasing in popularity and usefulness, the circulation of books being more than 400 as compared with the numbers of the previous year. The financial position has improved somewhat, but still shows a deficit between the annual income and expenditure of a little less than £50. To meet this and a bank overdraft of £108 the Committee show good security, but feel that the prospects of the institute would be more encouraging if there was an absolute freedom from debt.

HEALTH LECTURES.

The third series of lectures have been well attended and well delivered. The interest manifested in these discourses has been well sustained and their success assured by the reputation and ability of the lecturer. The subjects have been such as to set an intelligent public thinking for themselves on the many problems associated with the more common ailments which affect the health and constitute the enjoyment or otherwise of daily life. After such teaching no reasonable excuse can be afforded for preferring the ignorance of bliss which is frequent among those who "enjoy" bad health.

THE JAFFRAY SUBURBAN HOSPITAL.

The 15th of March was a memorable day in the history of this young and promising branch, for it witnessed the transfer of the first detachment of patients from the parent institution. They were conveyed from the general hospital in ambulances and carriages, and on their arrival were at once placed in comfortable quarters in the pure atmosphere of their temporary home. Surrounded by plants, flowers, pleasing pictures, and readable books, the bracing air and cheerful adjuncts ought to produce palpable effects upon the chronic sufferers, and materally aid in restoring them to health and vigour. The value of this auxiliary to the older hospital will be immense, as it cannot fail to add to the prestige which the latter institution has accumulated during a period of more than a century in the cause of humanity.

THE WORKHOUSE INQUIRY.

As a result of the recent inquiry by the Local Government Board concerning the difference between the guardians andtheir senior medical officer, I regret to say that the authority has called for the resignation of the medical officer. It is difficult for outsiders to appreciate the merits of a dispute upon matters of discipline in technical details. The senior medical officer has held his position for a number of years, and has worked with zeal; that this has not been tempered with discretion is the opinion of the higher powers, and, like many good officials, he must yield with as good a grace as possible to the force of circumstances which he cannot control.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

GATESHEAD DISPENSARY.

AT the annual meeting of the Gateshead Dispensary held recently, the resignation of Dr. Wm. Robinson was received and accepted with regret. Dr. Robinson, who has been appointed medical officer of health for the borough, has acted on the honorary staff of the dispensary for nearly thirty years. The Committee passed a hearty vote of thanks for his long and valuable services. It was mentioned in the report presented by Dr. Hardy at the same meeting, that the work of the year had compared favourably with that done in previous years. The number of patients under treatment at the date of the last report was 221. This, with 2912 admitted during the year, makes the total number of letter-patients treated 3133, as compared with 2815 in the previous year. The letter patients consist of 2620 home patients and 513 out-patients. The number of casuals was 9841, this being made up of 290 accidents, teeth extractions, and 8898 medical cases. The casualty patients of the year before were 10,003, and notwithstanding that the twopenny system has been carried out during the whole year the number has been practically maintained. During two or three months of the year a severe epidemic of measles was experienced; this was also followed by a slight one of scarlet fever, but the dispensary patients had been entirely free from the more severe forms of zymotic disease. The Samaritan fund had been of great service, and was largely drawn upon. It may be mentioned that the charge of twopence for the casualty patients had yielded

over £74 to the funds of the dispensary without in any way diminishing the attendance of patients.

HARTLEPOOL.

At the late meeting of the Hartlepool Port Sanitary Authority it was stated that the plan for the new hospital had been conditionally approved by the Local Government Board. The Rev. H. E. Savage offered to provide trained nurses, beds, &c., for temporary cases of small-pox if the authority would furnish a suitable building. A committee was appointed to frame bye-laws to regulate the removal of cases occurring on shipboard to the hospital. The medical officer, Dr. Biggart, reported that there were now in the tents seven cases of small-pox and five of fever, also that the former disease was on the increase. There had been fourteen cases from Hartlepool during the month, and eight from West Hartlepool.

Newcastle-on-Tyne, March 24th.

PARIS.

(From our own Correspondent.)

THE LATE PROFESSOR CHARLES ROBIN.

IN the will of the late Professor Charles Robin, which has lately been published, I find the following paragraph. After giving instructions about his funeral, which he particularly desired should be civil, he says: "If I die at Paris, my autopsy should be performed, as soon as possible after death, by one of the prosectors or assistants of the Faculty, designated by the the dean. My brain and my eyes should be removed, to be studied comparatively, the right eye with the left, which was wounded in 1835 by a blow with a stick, in order that the origins and optic convolutions may be properly studied." On this extract, Dr. Fano, a well-known ophthalmologist, makes the following remarks in his "Journal d'Oculistique":—"Charles Robin having died in the last quarter of 1885, it would be fifty years since his left eye was wounded. During all that time the right eye was never in any way affected, and everyone knows the fatigue that this organ must have been subjected to in a *savant* who spent a great portion of his days in working with the microscope, as he was a professor of histology. What becomes of the theory of what is termed sympathetic ophthalmia in presence of such a fact? What should be thought of the doctrine professed by some ophthalmologists relating to the necessity of enucleating a wounded eye to prevent sympathetic ophthalmia of a healthy eye?"

M. PASTEUR.

M. Pasteur is being loaded with honours, as he has been decorated by nearly all the Sovereigns of Europe, for his remarkable discovery of the means of prevention of hydrophobia, and the King of Portugal has just sent him an autograph letter, conferring on him the Grand Cordon of the Order of St. Jacques, a decoration specially designed to recompense scientific merit. This letter was handed to M. Pasteur by Dr. Bournay, one of the doctors who arrived in Paris on the 2nd inst. with three children from Portugal, reported to have been bitten by a mad dog. The children are sent at the expense of the Queen, to undergo M. Pasteur's treatment. They were accompanied by relatives, and by Drs. d'Abreu and Bournay, the former of whom will remain in Paris to study at his own expense M. Pasteur's system of inoculations. The French Minister of the Interior sent to M. Pasteur's laboratory about three days ago two foreigners who had been sent from Rome—a police agent and a gaoler,—reported to have been bitten by mad dogs. Eight more Russians arrived on Sunday morning, accompanied by a doctor and a veterinary surgeon, who took them direct to M. Pasteur's laboratory. They were reported to have been bitten, some by a mad wolf and the others by mad dogs. They were all wounded in the face; and as they are in good health, M. Pasteur inoculated them at once. Another patient of the first Russian party of nineteen, already referred to, died at the Hôtel Dieu on Friday last with symptoms of hydrophobia. He was one of the patients who was so frightfully mutilated in the face, and one of the teeth of the rabid wolf was found broken in his jaw at the necropsy. I may here remark that the first patient who died became affected with rabies twenty days after having been bitten, and the one now under notice thirty-two days. The treatment was commenced a fortnight after they were bitten. The treatment of the other seventeen having terminated without any untoward circumstance, they were about to return to their native country, when, on second consideration, they have been detained in order to undergo another course of M. Pasteur's treatment. After a long debate at the Academy of Medicine at Rome, it was decided to send one of its members to Paris, at the expense of the Municipality, to study and follow M. Pasteur's anti-rabic treatment. It is reported that the German Government have also decided upon sending a mission to Paris to examine and report upon M. Pasteur's method. It is presumed that this mission will be confided to M. Virchow and M. Koch. In anticipation of some more convenient place being provided for M. Pasteur to carry out his method, the Municipal Council have placed at his disposal some wooden huts that had been erected for another purpose in the Rue Vauquelin, and which are now unoccupied. The *Official Journal* has just published the eighth and ninth lists of the subscription for the Pasteur Institute, which amounts to 495,462 francs.

Paris, April 6th.

MEDICAL NOTES IN PARLIAMENT.

Workhouse Dietary Tables.

IN the House of Lords, on the 2nd inst., Lord Sudeley, in reply to a question put by Viscount Barrington touching the death of an infant in Totnes Workhouse from overfeeding, stated that the General Consolidated Order issued by the Poor-law Commissioners provides that paupers shall be dieted with the food set forth in the dietary table prescribed for the use of the workhouse. The dietary table at Totnes directs that children under two years of age shall be dieted at discretion. The order also provides that the medical officer shall be consulted by the matron as to the nature of the food of the infants, and makes it his duty to give all necessary instructions as to the diet or treatment of children. The Local Government Board would cause further inquiries to be made at Totnes into this special case.

Lunacy Acts Amendment Bill.

On the 6th inst., on the report of amendments in the Lunacy Acts Amendment Bill, certain amendments were proposed by the Lord Chancellor, and after a conversation, in which Lord Halsbury and the Earl of Selborne took part, was agreed to. None of them affected the principle of the Bill, and some of them were merely verbal. Lord Milltown and Lord Hobhouse proposed amendments relating to private asylums, which were rejected, and the report was afterwards received.

The Idiots Bill.

This Bill passed through committee without amendment.

Contagious Diseases Acts Repeal (No. 2) Bill.

On the 2nd inst. the House of Commons went into Committee on this Bill, when Mr. Campbell-Bannerman stated that it was the intention of the Government to continue this year the contributions which had been made under the authority of the Acts to certain hospitals. The Bill then passed through Committee, and, having been reported without amendment to the House, was read a third time.

Medical Act (1858) Amendment Bill.

On the 5th inst., on the motion of Sir L. Playfair, leave was given to introduce a Bill to amend the Medical Act, 1858. The Bill was brought in and read a first time.

The Case of William Goslin.

On the 7th inst., in reply to Mr. W. James, Mr. Childers stated that, so far as he had been able to ascertain, the prisoner William Goslin complained to the medical officer on Monday, the 15th ult. The next day he was taken off the treadwheel. On the 17th he was ordered medicine and put to bed in his cell. On the 19th he was ordered into hospital, and he died on the 21st. The medical officer did not seem to have recognised sufficiently early that the case was one of pneumonia. He should order a most strict inquiry into the whole matter.

THE quinquennial census of the French population is to be taken on the 30th prox.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council held on Thursday, April 8th, Mr. Bruce Clarke was awarded the Jacksonian Prize for 1885, the subject being "The Diagnosis and Treatment of such Affections of the Kidney as are amenable to direct Surgical Interference." The subject for the Prize for the present year is "The Pathology, Diagnosis, and Surgical Treatment of Diseases of the Thyroid Gland." It was resolved that the subject for 1887 be "On the Pathology, Diagnosis, and Treatment of Tumours of the Bladder." No dissertation was received for the Collegial Triennial Prize. It was resolved that the following be the subject of the next Collegial Triennial Prize—viz.: "On the Structure and Functions of the Ganglionic System of Nerves in Man, to be illustrated by reference to Comparative Anatomy."

Mr. Marshall brought forward the following motion, which was seconded by Sir J. Paget, and carried by a large majority:—

"That the Council have considered the resolution carried at the meeting of Fellows and Members held on Dec. 17th last, in reply to a communication from the Council bearing date the 16th of the previous month, which resolution is as follows:—'That the answer of the Council is not satisfactory, and that the Council be respectfully requested to reconsider the subjects: (1) Of the representation of Members of the College; and (2) of submitting for approval any alterations proposed to be made in the constitution or the relations of the College, or in any of its bye-laws, to a meeting of the Fellows and Members.' That the Council, in reply to this resolution, have to make the following statement:—

"1. As regards the subject of the 'representation of the Members of the College.' Whilst fully recognising the gravity of the question of the representation of Members of the College (presumably in or upon the Council), the desire of Members to be so represented, and the advantage of uniting in harmonious relationship all the constituent elements of the College, the Council still retain the opinion already expressed by them, 'that it is not desirable to diminish the privileges of the Fellowship by depriving Fellows of the exclusive rights of electing to the Council and of being eligible to become members thereof.' Entertaining this view, the Council are unwilling, and, indeed, unable consistently, to take proceedings for making any organic change in the constitution of the College which would impair the present status of the Fellows, by whom alone they have been elected to office as the governing body of the College. The two methods of widening the basis of the Fellowship, one by election and the other by examination, just agreed to by the Council, by means of which it is hoped that the acquisition of the Fellowship and its concomitant rights by Members of the College will be facilitated, involve no organic or constitutional change in the government of the College. The Council are quite aware, however, that these new proposals do not constitute a complete response to the desire of Members to a share of representation in or upon the Council. At the same time they would point out that no detailed plan, formulated by the two bodies mutually interested in the question—that is, the Fellows and the Members—by means of which a share of representation might be assigned to the latter, has yet been presented to the Council. The Council are quite prepared to give careful attention to any such jointly authorised plan approved by a majority of each body, and would found their decisions concerning it, not merely upon a consideration of the relative interests of the Fellows and Members, but also upon a due regard to the position and future welfare of the College. 2. That in reference to the other subject—viz., that of submitting questions to general meetings of Fellows and Members,—the Council have to reply that, whilst they still adhere to the opinion that it is unnecessary, and would as a rule be impracticable, to refer certain questions to the consideration of a general meeting of the Fellows and Members, they wish to state that, in accordance with their declared view, 'they would be glad to consult the Fellows and Members when larger questions arise, such as those which concern the constitution of the College,' and they would take care to report the conclusions at which they might arrive, in regard to any plan presented to them concerning the representation of Members, to a special meeting of Fellows and Members. The Council, however, could only regard such a meeting as consultative, and not as possessed of a direct power to veto or alter their decisions."

It was moved by Mr. Lund, and seconded by Mr. Macnamara: "That the Council do hereby rescind so much of the resolution passed at the meeting of the Council of the 12th of November, 1885, as relates to the non-desirability of Members participating in the election of Fellows as members of Council, and do substitute in the first paragraph of the said resolution the following words—viz.: 'That it is not desirable to diminish the privileges of the Fellowship by depriving Fellows of the exclusive right of being eligible to become members of the Council.'"

This motion was lost by 17 to 4.

Mr. Henry Cayley of Calcutta and Mr. George Yeoman Heath were elected Fellows of the College under Sec. 5 of the Charter relating to Members of fifteen years' standing.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 3rd inst., and when eligible will be admitted to the Pass Examination:—

J. L. Owen, Hugh Robert, G. H. Wilson, F. W. Vernon, G. A. O'Brien Reid, and W. P. Johnstone, Edinburgh University; R. C. Wakefield, Glasgow; J. J. Hanley, Dublin; W. W. Margemont, Ceylon Medical College; H. M. Holt, Yorkshire College, Leeds; H. B. Williams and F. Cant, Owens College, Manchester; G. A. Waring, Belfast; G. H. Douthwaite, Birmingham.

Passed in Anatomy only:—

Algernon J. Horton, Birmingham; A. H. Barstow, W. H. Thompson, and J. S. Vassalli, Yorkshire College, Leeds.

Passed in Physiology only:—

R. B. Morris, E. A. Humphreys, Thomas Boulton, and R. H. Read, Owens College, Manchester; J. T. Harty, Cork; G. J. Wontersz, Ceylon and Edinburgh University; G. F. Barber, Sheffield Medical School; W. H. Webster, Edinburgh; R. T. Wrightman, Sheffield Medical School.

Candidates referred for six months, 6; for three months, 15.

Passed on the 6th inst.:—

W. Twyford, J. E. Platt, H. Ramsden, S. F. Mawson, A. H. Marsh, W. Nuttall, A. E. Brindley, H. Langdale, T. A. Goodfellow, and H. C. Faulke, Owens College, Manchester; W. S. Lang, Edinburgh University; G. D. Freer, Birmingham; R. G. Sheldon, Liverpool; A. D. Tripp, Guy's Hospital; Frederick Barker, St. Thomas's Hospital; H. C. Fox and J. P. Smith, Middlesex Hospital; J. L. Firth, King's and University Colleges; O. M. Jones, London Hospital.

Passed in Anatomy only:—

C. Ridley Pigg and T. F. Clemson, Owens College, Manchester.

Passed in Physiology only:—

H. Vermaak and G. Saint Johnston, Birmingham; J. Robinson, Yorkshire College, Leeds; W. Hague, Owens College, Manchester; W. Jenner Best, London Hospital.

Candidates referred for six months, 7; for three months, 9.

SOCIETY OF APOTHECARIES.—The following gentlemen passed the examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on the 1st inst.:—

Hodge, William Theodore, M.R.C.S., Middleton, Tamworth.
Hubbard, Daniel Lovett, The Grove, Clapham-road.
Nevins, John Ernest, Abercrombie-square, Liverpool.
Rake, Herbert Vaughan, Fordingbridge, Salisbury.
Wheatley, James, Edgerton, Huddersfield.

AT the monthly meeting of the Association of Public Sanitary Inspectors on the 5th inst. Dr. Alfred Carpenter delivered a lecture on Sanitary Legislation.

ON the 4th inst. a church parade of the various temperance orders having lodges in South London was held on behalf of the London Temperance Hospital.

MURCHISON SCHOLARSHIP EXAMINATION.—We are asked to state that application for admission to this examination will be received up to the 11th inst., as originally advertised.

AT a conference on sanitation, on the 6th inst., in connexion with the Architectural and Building Trades' Exhibition now being held at the Agricultural Hall, Mr. R. K. Burton read a paper on Drain Testing, and Mr. Howard Smith delivered an address on Sanitation. A discussion followed.

THE RIVER LIFFEY.—At a meeting of the Dublin Corporation this week a sum of £200 was voted for cleansing the foreshore of the river Liffey.

ON the 1st inst., Dr. Louis Parkes delivered a lecture at the Parkes Museum on London Vestries and the Administration of Sanitary Law in the Metropolis. The address was followed by a discussion, in which Mr. Shirley Murphy, Mr. Mark Judge, and others took part.

VACCINATION GRANT.—Dr. Yarrow, public vaccinator for the St. Luke's division of the Holborn Union, has been awarded the Government grant for efficient vaccination for the third time.

AT Gillingham, on the 4th inst., a child aged nine years was in the act of inflating a toy balloon, when, suddenly trying to reverse the operation by sucking the air back, the toy was drawn down the child's throat, causing suffocation. A similar case is reported to have occurred in the same neighbourhood within the past month.

ALLEGED DEATH FROM SEA-SICKNESS.—Early this week an elderly female named WATSON, a steerage passenger from Fleetwood to Belfast, was taken ill during the voyage, and when she reached the latter place she was found to be unconscious. She was removed to the Royal Hospital, but she died the same day.

BIRMINGHAM MEDICAL INSTITUTE.—The officers of the institute elected at the recent annual meeting are—Professor Vose Solomon, President; Dr. Thomas Savage and Mr. C. A. Newnham, Vice-Presidents; Dr. Robert Saundby and Mr. Bennett May, Hon. Librarians; Mr. Gilbert Barling and Mr. Wood White, Hon. Secretaries.

ABERDEEN HOSPITAL FOR INCURABLES.—The annual meeting of the managers of and subscribers to this institution was held on the 1st inst., when the report showed that the average number of patients during the past year had been 38. The ordinary expenditure amounted to £1000, and the income, excluding legacies, to £751. The cost of the new buildings has exceeded the amount received for the old premises by nearly £3000. The committee appeal for fresh and increased subscriptions.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—A statue of Mr. William Dease, who was President in 1789 and died in 1798, will in a few weeks be erected in the entrance hall of this College. The statue, which is life size, has been executed in Carrara marble by Mr. Thomas Farrell, R.H.A., the eminent sculptor, and represents the deceased surgeon in the costume of the time in which he lived. He is seated in a chair holding in one hand a volume of his writings. The pedestal is already in position in the hall, and is formed of Sicilian marble. We may add that the cost of the statue has been defrayed by a grandson of Mr. Dease.

YORKSHIRE NORTH RIDING INFIRMARY.—The annual court of governors of this institution was held at Middlesborough on the 1st inst., when the committee reported that the number of patients admitted during the past year was 545, against 494 in 1884, the opening of the children's ward in November accounting for a portion of the excess. The number of out-patients again showed a very decided increase—viz., from 1419 in 1884, making 9034 attendances, to 1811 in 1885, with 13,863 attendances. The subscriptions and donations amounted to £2914 and the expenditure to £2930. The report and balance sheet having been adopted an illuminated address was presented to Dr. Williams, one of the hon. medical staff of the institution, in recognition of his valuable services during the past 15 years.

THE LATE DR. BRONNER.—On the 6th inst., at a well attended meeting held at Bradford, it was resolved:—"That this meeting desires in some public manner to express its sense of the eminent services of the late Dr. Bronner in connexion with the medical institutions of the town, and especially the Eye and Ear Hospital, which he was instrumental in establishing; and to which he gave his untiring attention to the day of his death; that a subscription list be opened, with the view, in the first instance, of raising funds to clear off the debt on the building of the above-named hospital, and, in the next place, of founding a laboratory for scientific purposes in connexion with the hospital, this meeting feeling assured that the late Doctor had these objects nearest his heart." A committee was appointed to give effect to this resolution, and a sum of upwards of £1000 was subscribed in the room.

HEALTH OF BELFAST.—During the five weeks ending the 27th ult. there were 335 fatal cases of diseases of the lungs, a number equal to a rate of 14·4 per 1000. This excessive mortality may be mainly attributed to the inclemency of the weather during the month of March.

INSTITUTE OF ACTUARIES.—At a meeting held at the rooms of the institute, Adelphi-terrace, on the 29th ult., Mr. James Chisholm, F.I.A., read a paper criticising the method in use by Life Assurance Companies of adding a number of years to the age of a person proposing to assure his life, to compensate for supposed extra risk due to impaired health or imperfect family history. Mr. Chisholm contended that the method in question was based on an incorrect theory, and was moreover misleading in practice. He made suggestions, illustrated by a diagram, for obtaining the opinion of medical examiners in a more accurate way, and expressed the opinion that it was very desirable that assurance companies should adopt as far as possible one common form of medical report. Several members of the medical profession were present, some of whom took part in the discussion which followed the reading of the paper.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ANDERSON, JOHN, M.B., C.M.Aber., has been appointed Medical Assistant at Elmhill House Asylum, Aberdeen, vice Sinclair, resigned.

BEVERS, R. A., M.R.C.S., L.S.A.Lond., has been appointed Consulting Dental Surgeon to the Radcliffe Infirmary, Oxford.

COMBES, REGINALD H., M.R.C.S., L.R.C.P.Lond., has been appointed Resident Medical Officer to the North-West London Hospital.

HALLIBURTON, W. D., M.D., B.Sc., M.R.C.P., Sharpey Physiological Scholar, has been appointed Assistant Professor of Physiology to University College, London.

HUTTON, HENRY R., M.A., M.B.Cantab., has been appointed Honorary Physician to the Ancoats Hospital, Manchester.

KETTLITZ, REGINALD, M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Hamsterly District of the Auckland Union.

PERKINS, H. A., M.D.Ed., M.R.C.S., has been appointed President of the Central Board of Health of Tasmania.

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On the 6th inst., at 105, Gloucester-place, Portman-square, the wife of John Anderson, M.D., C.I.E., Brigade-Surgeon, retired, of a daughter.

COTTELL.—On the 30th ult., at Old Brompton, Kent, the wife of Surgeon A. Cottell, Medical Staff, of a daughter.

EVANS.—On the 24th ult., at 21, Charles-street, Cardiff, the wife of Dr. Frederick William Evans, of a son.

MARRIAGES.

DAVIDSON—HENDERSON.—On the 6th inst., at St. Augustine's, Forest-hill, James McKenzie Davidson, M.B., C.M., of Aberdeen, to Georgiana Barbara Watt, daughter of the late W. Henderson, of Aberdeen.

GROOM—CHAPMAN.—On the 6th inst., at Brussels, Harry Groom, M.B., M.R.C.S., L.S.A.Lond., B.A., of Wisbeach, to Rebecca (Minnie), third daughter of William Chapman, Esq., of Antwerp.

MARSH—HOOPER.—On the 30th ult., at Holy Trinity Church, Clapham, Frank Marsh, F.R.C.S. Eng., of Graamere, Rolton-park-road, Edgbaston, late of Stafford, to Annie Constance, youngest daughter of the late William Hooper, of Beechwood, Clapham-common.

DEATHS.

MANLEY.—On the 5th inst., at Ipplepen, Devon, Henry Manley, M.R.C.S., L.A.C., aged 58.

PETT.—On the 3rd inst., at his residence, Avenue-road, Regent's-park, Alfred Pett, M.D., in his 82nd year.

RAWLINS.—On the 2nd inst., Frederick William Armstrong Rawlins, M.D., late of Stoke Newington, aged 59.

RICHARDS.—On the 1st inst., Owen Richards, M.D., of Vronheulog, Llandderfel, formerly of Bala, aged 73.

SKEEN.—On the 2nd inst., at Westfield-terrace, Aberdeen, Deputy Surgeon-General William Skeen, M.D., Army Medical Staff, aged 53.

THOMSON.—On the 28th ult., at Aldershot, Surgeon-Major A. Thomson, M.D., Army Medical Staff, aged 45.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, April 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesdays, same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 3.30 P.M.; Thursday, 2 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Mr. Alan S. Cole: The Arts of Tapestry-making and Embroidery (Cantor Lecture).
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Cases will be shown by the President, Dr. Ord, Dr. Stephen Mackenzie, Dr. Purcell, Mr. John Morgan, and others.

Tuesday, April 13.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Arthur Gamgee: The Function of Circulation.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Mr. W. H. Stone: Man as an Electric Conductor, Condenser, and Electrolyte (Lumleian Lecture).
SOCIETY OF ARTS.—8 P.M. Mr. P. L. Simmonds: Progress of the British Possessions in the last Quarter of a Century.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Sedgwick: The Chemical Pathology of Respiration in Cholera.—Mr. Knowsley Thornton: Two cases of Splenectomy.

Wednesday, April 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesdays and Thursdays, 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department, Tuesdays and Fridays, 9.30 A.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; and on Friday, 2 P.M.; and Saturday, 1 P.M.
HUNTERIAN SOCIETY.—8 P.M. Mr. Bryant: Cystic Tumours of the Breast.
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. James Cameron: Observations on a Certain Malady occurring among Cows at a time when the Milk produced by them disseminated Scarlatina.—Dr. Buchanan: Certain Alleged Injuries by Vaccination in North Germany.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. G. Massee: Structure and Evolution of the Florideæ.
SOCIETY OF ARTS.—8 P.M. Dr. C. Meymott Tidy: The Treatment of Sewage.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be shown by Drs. Greig Smith, George Elder, and others.—Dr. Robert Barnes: Vicarious Menstruation.

Thursday, April 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Dewar: Electro-Chemistry.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. W. H. Stone: Man as an Electric Conductor, Condenser, and Electrolyte (Lumleian Lecture).
PARKES MUSEUM OF HYGIENE.—8 P.M. Rev. F. Lawrence: Erasmanals, Sanitary Burials.
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. Broadbent: Case of Bulbar Paralysis.—Dr. Stephen Mackenzie: An Unusual case of Pemphigus.—Mr. A. J. Pepper: A case of Excision of the Knee-joint.—Mr. Winslow Hall: Specimen of Congenital Malformation of the Heart.—Also cases by Mr. Jonathan Hutchinson, Dr. Hughlings Jackson, Mr. H. E. Juler, and Mr. Noble Smith.

Friday, April 16.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Prof. Bischof: Dr. Koch's Gelatine-Peptone Test for Water.
ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Prof. Sir Henry E. Roscoe: Recent Progress in the Coal Tar Industries.

Saturday, April 17.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Oliver Lodge: Fuel and Smoke.

METEOROLOGICAL READINGS.

(Taken daily at 8.20 a.m. by Steward's Instruments.)

THE LANCET Office, April 8th, 1886.

Date.	Barometer reduced to Sea Level and 32° F.	Directions of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia tion Varns.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.20 A.M.
Apr. 2	29·83	S.W.	56	51	100	62	41	...	Cloudy
,, 3	29·88	W.	49	47	91	56	47	·17	Cloudy
,, 4	29·93	S.W.	49	47	64	53	44	...	Cloudy
,, 5	29·94	W.	49	46	96	61	45	...	Overcast
,, 6	29·69	W.	52	49	100	57	48	·03	Cloudy
,, 7	30·01	W.	45	42	72	52	39	...	Cloudy
,, 8	29·27	W.	51	48	85	52	43	·19	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

LUNACY LAW REFORM.

A. H. B.—We must adhere to the expressed opinion that it is very undesirable that medical practitioners should derive profit from lodging the insane in their houses; and to the view that single patients are not, as a rule, well placed. It is no part of our contention that the treatment of lunacy must be carried on by specialists. Our readers generally will not fail to know that we claim for the profession as a whole the right to practise every branch of the art of healing. The opinions we have formed on this subject are based on observation and experience, and we must be excused for feeling strongly, and saying plainly, that when the subjects of mental disease are removed from the immediate care of their friends, it is better that they should be placed in the custody of public officials responsible to the State, and who derive no pecuniary advantage from receiving the individuals under their care.

Festina.—The question can hardly be answered without having read the tracts; but we do not see anything to object to in the advertisement itself.

Mr. E. Bingham.—The lists are published in THE LANCET weekly.

THE LIBRARY OF THE ROYAL COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—There is really no excuse for the discourtesy which is shown the Fellows and Members of the College of Surgeons who use the library of that institution by some official persistently neglecting to forward to the medical journals intimation of the times when the library will be closed. There has been no mention of the date of the expected opening of the building upon the Embankment, consequently there is still, it is presumable, plenty of time to take happy "constitutionals" to the library of the College of Surgeons, fruitless though they may be, in regard to the object for which they are undertaken. But the sooner the Hall is opened the better, for then the classic walls of the College Hall will cease to re-echo whispered epithets of doubtful politeness let loose by disappointed workers.

I am, Sir, yours truly,

Finsbury-circus, E.C., March 30th, 1886. H. PERCY DUNN.

PRINCELY BEQUESTS.

To the Editor of THE LANCET.

SIR,—Many of the readers of THE LANCET will be glad to hear that the late Mr. John Smith, a much esteemed medical practitioner of Bishop's Lydeard, Somerset, has by will given to the Taunton and Somerset Hospital the sum of £1000, payable on the decease of his wife. In addition to this sum, the same gentleman has bequeathed to the Royal Medical Benevolent College at Epsom (after the decease of his wife) a sum of money not far short of £10,000.

I am, Sir, your obedient servant,

Taunton, April 4th, 1886. ARTHUR KINGLAKE, J.P.

A DESCRIPTIVE TITLE FOR A PHARMACIST.

SOME misunderstanding exists amongst the public as to the signification of "chemist" and "apothecary." A suggestion has been made by a German, who objects to the word "apotheker" as of foreign origin, that the Teutonic pharmacist should be styled "Gesundheitswiederherstellungsmittelzusammenmischungakundiger."

Alpha.—A fee cannot be claimed.

WARLOMONT'S MANUAL OF ANIMAL VACCINATION.

To the Editor of THE LANCET.

SIR,—Being away from home, I have only just observed in THE LANCET of Feb. 13th and 20th the notice of this Manual which you were good enough to insert, and Dr. Harries' reply to some points in that notice.

I respect the rights of criticism, especially when, as in your esteemed journal, reply is permitted. Here is mine. Your reviewer is disappointed at not having found "more exact evidence.....calf vaccine." He is exacting; the author has fully described the principles of the processes hitherto used by him. As to the comparative value of his preparations, it is the medical world that must decide; it, at least, cannot be unaware of the considerable use made of them in the United Kingdom and in the colonies, and nothing could speak more eloquently. As to statistics, Dr. Harries has already shown with what facility they may be distorted. I have stated, and I repeat, that *living* vaccine, human or animal, is always more certain, so far as concerns its *immediate manifestations*, than *preserved vaccine*. Only, as vaccination from arm to arm is mistrusted by most people, and as that from calf to arm is as yet uncommon in general practice, it was necessary to find a preparation which should most nearly approach that certainty, and that is what I have attempted. The favour with which my "emulsion" has been received proves that I have not come far short of the ideal. As to the question of learning whether human lymph can bear comparison with this last in the matter of carriage to great distances, I believe that to be finally determined. It is only *very exceptionally* that human vaccine reaches remote regions in a state of activity, whilst the applications that I am constantly receiving from the Congo prove that my "emulsion," as a rule, arrives there in a state of complete activity.

Whatever may be the merit of my little work, your reviewer recognises none. That is not much! "There is little," he says, "scientific work." What does this prove, if it be not that the reviewer of THE LANCET, presumably well read in the specialty, and knowing my original treatise, has found nothing new in the Manual, which is but a condensed extract of the former? But could it be otherwise? And is it necessary that a book be stripped of all scientific interest, for those desiring to be placed *au courant* of a question, because it is only an extract, at least if the original work be not itself devoid of all scientific merit? Allow me to quote to you on this head the opinion of a man who is scarcely a novice in the subject: "That is," says M. Pasteur, "what I have just done with your book.....of such great general and scientific interest."

I am, Sir, yours truly,

P. WARLOMONT,
President of the Royal Academy of Medicine of Belgium.

San Remo, March 29th, 1886.

"CAN A HERNIA DISAPPEAR IN A FEW WEEKS?"

To the Editor of THE LANCET.

SIR,—The above is the title of an annotation in THE LANCET of Feb. 20th (p. 363). I am able to answer the question in the affirmative. A slowly on-coming hernia is by no means so likely to disappear, or be cured, as the one Dr. Velleman of Brussels saw; but I will vouch for the following. I copy from my note-books:—"July 27th, 1879, John D——, aged two years, was brought to me on account of a left oblique inguinal hernia. At the top of the right scrotal sac, just over the spermatic cord, is a congenital nævus, quite circular, one-eighth of an inch high and three-fourths of an inch in diameter. There is atrophy of the right testis, and hypertrophy of the left, with thickening of its cord. There is slight tenderness of the left testis. The hernia is a small one, not quite as large as a pigeon's egg, and comes only just outside the external ring. It was first noticed four weeks ago. Applied a truss." The child was brought to me next on Aug. 18th, when I noted the following:—"The tenderness of the left testis has disappeared, and the gland is softer. The truss-pad had caused some irritation of the skin, with a little inflammatory action beneath, and the hernia has completely disappeared. Making the child cry, crowding down the intestines by pressure on the abdomen, and bending his body backwards failed to force down any intestine or omentum. A weaker truss was advised to be kept applied for some time longer as a precaution." In this case the hernia disappeared in three weeks.—I am, Sir, yours truly,

P. O'CONNELL, M.D., M.Ch., Queen's Univ., Ireland.

Chicago, Ills., U.S.A., March 6th, 1886.

DRY DRESSINGS FOR INTERNAL CAVITIES.

To the Editor of THE LANCET.

SIR,—Since the publication in THE LANCET of my paper on the above subject I have had numerous correspondences from brother practitioners and chemists as to where to procure and how to make the vaginal suppositories referred to. Would you kindly allow me to state that specimens may be procured and all particulars obtained from Messrs. Clare and Hunt, chemists, Scarborough.—I am, Sir, yours truly,

Scarborough, April, 1886. CHAS. F. HUTCHINSON, M.D.

CIVILISATION AND THE SIZE OF THE HUMAN CRANIUM.

IN the course of a paper recently read before the Grant College Medical Society at Bombay by Surgeon D. N. Parakh, I.M.D., in which an account was given of the midwifery work done in the only obstetric hospital in Bombay for native women, the author remarked that from measurement soon after birth of the transverse, fronto-mental, and the antero-posterior diameter of the heads of native children the conclusion was that the greatest measurements were in the following order as to race: (1) European; (2) Persian or Iranee Parsee—i.e., a modern Persian professing the old Zoroastrian religion, and just arrived from Persia; (3) Parsee; (4) Goanese; (5) Mahommedans, Hindoos, and native Christians. From what he had seen in practice, his impression was that owing to the increasing civilisation of the masses in India the human cranium is gradually increasing in size, the pelves of women unfortunately not undergoing a corresponding increase in capacity. This is particularly the case among the Parsees, who have, under the British rule, suddenly emerged from a semi-barbarous life into a life of great mental activity, the males (even now) being about a generation or two ahead of the women in that respect. Hence British rule, whilst it has improved the head and heart and purse of the coming Parsee race, has entailed greater suffering on the parturient woman. In saying so, Mr. Parakh was not, he stated, unmindful of other evils of civilisation which make parturition difficult. The average weight of the children at birth was 5·85 lb. The maximum was 8·75 lb. The minimum 3·75 lb. The heaviest children were in precisely the same order as to race as mentioned above in the case of head measurements.

Professor Buchanan (Glasgow).—Yes, in an early number.

THE LUNACY LAWS.

To the Editor of THE LANCET.

SIR,—I feel it my duty to report the experiences I have lately had in certifying as to the mental condition of a supposed lunatic: believing it will afford assistance to many, and draw attention to a serious defect in our lunacy laws and expose a grave injustice, both to medical men and to those whom they may be called upon to examine; as a premium obviously is being offered on their being able to establish the insanity of the person.

Last November, late one evening, the relieving officer of the Brentford Union called on me, bringing a printed official order, signed by the chairman of the Brentford magistracy, commanding me to visit a very poor young girl in the neighbourhood who had been reported to him as being insane by the Poor-law official. I was also directed to send in writing by that night's post the opinion I had formed respecting her condition. I reported that although the girl exhibited many suspicious symptoms, yet I hardly felt able to certify her as being insane; but I would advise her admission into the workhouse infirmary, where she might be watched. The relieving officer, however, informed me that as she was a suspicious mental case she could not be admitted, there being no accommodation there for such patients. Accompanying my report was an application from myself for a fee of 21*s.*, to which I received no reply. I applied again with the same result. Then I wrote to Mr. Glossop, the magistrate who had signed the order, and from him I received a most kind and courteous letter, assuring me that the matter should be immediately looked into by him. In a few days he wrote again to say that he had written to the clerk of the magistrates, and he had replied that the guardians had refused to acknowledge their responsibility, and the Local Government Board and the Lunacy Commissioners had also denied assistance. Unfortunately just at this moment Mr. Glossop died; but had he lived I feel sure he would have left no stone unturned until my fee had been paid to me. Mr. Hastings Draper, solicitor, of 83, Vincent-square, kindly now took the matter up, and on last Saturday week he made an application at Brentford before the magistrate on my behalf. But the decision was given against me, the magistrates refusing to acknowledge their responsibility, and also acquitting the guardians from theirs. I was, however, directed to write to the clerk of the county board, but he referred me to Scotland-yard, and there the matter rests at present, the reply that I shall probably next receive from that quarter being quite as unsatisfactory as the others. The magistrates refused my application on the ground that although the relieving officer had applied to them for assistance, and the girl, although not in actual receipt of Poor-law relief, was nevertheless virtually a pauper, the guardians could not be made responsible, because she was not on the books as a pauper; and also for the astounding reason that I was unable to establish her insanity. Therefore it would appear that if she had been a pauper and not lunatic, or if she had been a lunatic and not a pauper, or if she had been a lunatic possessed of property and at large, or if she had possessed means and I had failed to establish her insanity, I had no claim on the magistrates or guardians, even though I had been in each instance ordered by the magistrates to attend. I think I need add little to what I have written in order to show what a great injustice exists both towards the medical practitioner and the unfortunate individuals he may be called upon to examine, but I do not believe you will deem that I have trespassed unnecessarily on your space in endeavouring to urge that immediate steps should be taken to rectify so great an evil.

I am, Sir, your obedient servant,

Baling-common, April 8th, 1886. W. C. STEELE.

MICRO-ORGANISM OF CARCINOMA.

To the Editor of THE LANCET.

SIR,—On Saturday last I received from Dr. Andrew of Shrewsbury a breast containing a hard lump, which on section proved to be a typical "scirrhus." As the specimen was quite fresh, and had not been in any kind of hardening fluid, or, indeed, been cut into or examined in any way, I thought it a good opportunity for ascertaining the presence or absence of micro-organisms. I therefore dried the surface of the growth with filter paper, and made a cut through the centre of the tumour with a clean knife. I then scraped the cut surface, and moistened a series of cover glasses with the "cancer juice." The films, being dried, were stained with gentian violet, methyl blue, &c. At first I was not able to see any organisms, though the large nucleated cells of the alveoli were deeply stained. But in one or two preparations which had been longer in the staining fluid I was surprised to find the field entirely covered with enormous numbers of micrococci. They were but faintly coloured, yet were distinctly visible with a $\frac{1}{12}$th immersion objective. "Juice" from various parts of the tumour was examined, with the same result. Sections were then cut with the freezing microtome, and stained, with a view to demonstrate the distribution of the micrococci in the tissue elements. But though many dyes were used, and the sections, in some attempts, left many hours in the fluids, the micro-organisms were in most cases not stained at all; so that in one or two only, with very careful illumination, could the organisms be seen. From what was then made out, they seemed to abound chiefly in the spaces between the cells of the alveoli. They were also seen within the protoplasm of the cells. The fibres of the connective tissue were in places covered with them. They were much fewer in number beyond the growing margin of the tumour.

I am hoping that these observations will lead to the examination of many more carcinomata, and that a stain may be found which will colour these micrococci with certainty, even when *in situ* in thin sections of the morbid growth. I am, Sir, yours faithfully,

Iron Bridge, March 29th, 1886. LAW WEBB.

Ignoramus.—The term is one not recognised in medicine, and is probably intended to denote the peculiar tint of the expectoration.

HOSPITAL NURSES.

To the Editor of THE LANCET.

SIR,—I wish to appeal to you on behalf of the health of hospital nurses. Many nurses break down, and their health is permanently undermined, by their being kept on duty until they are laid up by serious illness, which illness might be prevented, or rendered much less serious, by a little relief from duty and proper medical treatment in the early stages. In most hospitals the matron has the entire control of the nurses; she engages and discharges them, and they are not allowed to speak to one of the medical officers without first obtaining her permission. Consequently, a nurse will never complain to the matron of not being well until she is really seriously ill, for fear the matron might think she was either shirking work or not strong enough for her duties, and so discharge her at once. A frequent cause of ill health is unsuitable and insufficient food, with too little time to take it. For example, at one of the smaller but most popular metropolitan hospitals breakfast, consisting of tea and bread-and-butter only, is served at 6.30 A.M., and only a quarter of an hour is allowed to take it. After this somewhat scanty and hurried meal, the nurse has to be on duty in the wards for five hours and a quarter before she gets her dinner. Cannot something be done to improve this? The patients have their medical officers and the house visitor to supervise the supplying of their wants, and to whom they can appeal. Could not the same excellent supervision be extended to the nurses' home? Apologising for troubling you,

I am, Sir, yours faithfully,

A WHILOM HOSPITAL NURSE.

Hednesford, Staffordshire, April 6th, 1886.

Mr. C. Hammond.—Clinical Lectures by Pridgin Teale and Clifford Allbutt. J. & A. Churchill, 1885.

COLOUR-BLINDNESS AMONG MEDICAL MEN; "ANOSPHRESIA"; PARTIAL ANOSMIA AND HYPEROSMIA.

To the Editor of THE LANCET.

SIR,—I am indebted to Mr. St. Clair Buxton for his reply to my inquiry. I, of course, purposely avoided the question of any means of diagnosis other than vision. Truly enough, not all of us get called as witnesses as to fact; but medical practitioners are, I think, more liable to be called than the average run of men. It would seem advisable for all persons, particularly medical men, to have their vision tested for colour, and, if defective, to keep a detailed record of the facts. That might be useful, among other things, for a determination of the amount of change, if any, occurring with the lapse of years. I am greatly interested in Dr. Nicholas' "anosphresia." I think that there is no doubt about its existence, and I shall look forward with pleasure to the expression of any opinions with which Dr. Stevenson may favour us. Certainly, a partial anosmia—which I take to mean complete inability to smell one or a few odours—exists, as does a partial hyperosmia, an exceedingly acute power of smell for one or several odours, the powers of smell for all other odours being an average or "normal" one. This is one of the topics I have discussed in my little work mainly on "olfactics," which is now in the press.—I am, Sir, yours faithfully,

CHAS. H. PIESSE, M.R.C.S., F.I.C.,

Strand, W.C., April 1st, 1886. Public Analyst.

A SEA-VOYAGE AND AUSTRALIA FOR PHTHISIS.

To the Editor of THE LANCET.

SIR,—For the benefit of the profession generally, and particularly for those medical men who are so fond of sending away their phthisical patients to Australia as a last resort, a few suggestions may not be out of place.

I have just arrived, having come out in a ship in which, without exaggeration, there were quite 85 per cent. of invalids among the passengers, and those chiefly consumptive. From my own observations, I noticed that those in the first stage invariably recover, and if the journey does not cure them, a subsequent residence in Australia usually does. Those in the second stage sometimes benefit by the voyage, or, on the other hand, may go back; whilst those in the third stage nearly always succumb—I believe it is very rarely that they recover. Now, it is particularly respecting this last class that I venture to address you. As recovery is so rare, does it not seem a great shame to take these patients away from a good home with all its attendant comforts and kind friends to rough it by themselves at sea? And, I assure you, there is a very great deal to put up with, though it would be occupying too much of your valuable space to go into details. Then I would earnestly recommend the medical men in England to give it their utmost consideration before deciding to send a patient away in this stage. I do not think I am alone in these opinions. I believe they will be fully endorsed by those who have been to sea under similar circumstances. And now, as to the time of the year a patient should be sent out. Really, that does not matter; as soon as it is found that a patient is ill with phthisis, the sooner he sets out the better. At no time is the winter here so severe as at home, and in this neighbourhood it is particularly genial. The nights and mornings are frosty, but the days warm. The air is invariably very dry. In the summer, however, it is very hot, and a somewhat mountainous district should be chosen. Most of the Melbourne practitioners send their patients in the winter to Sandhurst, Echuca, or the Riverina.

Hoping these few remarks may be of some little use to medical men in England, Believe me, Sir, yours faithfully,

Sandhurst, Victoria. M.R.C.S.

THE COMMISSION ON HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—I am sorry to trespass on your limited space; but I quite agree with your correspondent, Mr. Moore, M.R.C.V.S. (p. 670), and cannot imagine why the name of the eminent veterinary surgeon, Mr. G. Fleming, should not have been placed on that Commission, or his name even mooted in connexion with it, which appears so conspicuous by its absence. Is it still in its embryonic state, or has a committee been formed, and an order promulgated to that effect, composed of those members of the profession whose names appeared a short time ago? If such is the case, I cannot but think a grave error has been committed by those responsible for such a board concerning the valuable information that might have accrued from such an authority on rabies canina. The very backbone or information we require lies here, and yet they do not place a representative of that profession on the list. For the sake o suffering humanity and the feelings of those medical men who have the misfortune to be brought into contact with that terrible malady, I think it but fair that every available source should be seized, and such would be greatly enhanced by placing Mr. Fleming on the list, by virtue of his position, and by so nobly heading that profession to which he belongs.

I have the honour to be, Sir, your obedient servant,

City London Infirmary, E., April, 1886. W. GEM.

L.R.C.P.—Parkes' Hygiene, Ganot's Physics, Baldwin-Latham's Sanitary Engineering, and the Public Health Acts. A practical knowledge of chemistry and microscopical analysis of water is required, as well as of the manner in which a sanitary report should be written.

A QUESTIONABLE TREAT.

To the Editor of THE LANCET.

SIR,—On the occasion of the Oxford and Cambridge Boat Race on Saturday last two friends and I, by virtue of cards of invitation from the local authority, were admitted to the (sewage) pumping station at Corney, Chiswick, to view the race, where we stayed some two hours. But during the whole time a most sickening odour prevailed. Was the authority justified in converting such a spot, with its tainted atmosphere, into a pleasure resort? There were hundreds of men, women, and children present. The works may satisfy the Thames conservators; but was not the purpose that it was put to on Saturday last liable to be injurious to health? I am, Sir, your obedient servant,

April 7th, 1886. W. W.

RINGWORM IN A NEW-BORN INFANT.

To the Editor of THE LANCET.

SIR,—A lady who for some time past has had a dread of ringworm appearing in any of her children was delivered about a month ago of a female child, which was found to have several spots of ringworm on its body and one on the scalp. These have gone on increasing, and now rather an extensive surface of the back is covered with the rings. Is it not unusual for this affection to appear in a child of that age? I should like some of your readers to say what treatment they would recommend under the circumstances (age of child and extent of surface affected).

I am, Sir, yours truly,

March 30th, 188 SURGEON.

AN UNUSUAL CASE OF CONGENITAL MALFORMATION.

To the Editor of THE LANCET.

SIR,—Perhaps you may consider the following case of sufficient interest to find a place in your columns.

On Jan. 28th I was summoned to the house of Mrs. P——, who gave birth to her eighth child at 1 P.M. on the previous day. The midwife in attendance complained that the child was sick each time it took milk-and-water, but that the food did not appear to reach the stomach. On examination, I found the child (a girl) healthy looking and well developed, and the mouth and fauces normal. Meconium and urine had passed several times. I left, promising to return in the evening, ordering a little weak milk-and-water to be administered at intervals during my absence. Hearing on my return that nothing had been retained in the child's stomach, I ordered some nourishment to be administered in my presence, so that I might watch the result. A few spoonfuls were taken, but the liquid was quickly returned unaltered. Thinking there must be some obstruction in the œsophagus, I explored this region with a No. 8 French coudée catheter, but the instrument was arrested at a point on a level with the upper border of the sternum. I tried one or two smaller sizes, with the same result, and came to the conclusion that the œsophagus was impervious at the point named. The child, after becoming very much emaciated, died at 2 A.M. on Feb. 2nd, the ejection of nourishment continuing until death. I think, apart from the abnormal condition of the œsophagus, the case is of some interest on account of the time the child existed without food, the character of the motions, which were passed daily until the day before death, indicating that nothing in the shape of milk had entered the stomach. I regret that the parents would not allow a post-mortem examination to be made.

I am, Sir, yours faithfully,

GEORGE HERBERT SALTER, M.R.C.S., &c.

Gisborne, Victoria, Australia, Feb. 2nd, 1886.

Mr. W. Wallace had better apply at the Office of the Crown Agents for the Colonies, Downing-street, S.W.

CASE OF DISTENDED BLADDER WITHOUT SYMPTOMS.

To the Editor of THE LANCET.

SIR,—The following case may perhaps be deemed worthy of record in your columns.

The Rev. M——, aged seventy, was first seen in September, 1885, for eczema. I discovered on examining his abdomen an oval tumour, which reached up to the umbilicus. This continued increasing in size until the middle of March, 1886, when I again saw him. The tumour had now grown above the umbilicus, and there was a slight bulging of it towards the left. He did not pass urine more than twice or thrice a day, and only once during the night, "to break the monotony," as he said. His urine was free from mucus or pus. Whilst under the influence of chloroform, Mr. F. Treves drew off three pints and twelve ounces of perfectly healthy urine, the tumour entirely disappearing. An examination per rectum revealed a large middle lobe of the prostate, and some enlargement of the right lobe.

I venture to bring this case forward in a very brief manner to demonstrate the occurrence of a bladder distended with nearly four pints of urine, and not causing any symptoms which gave rise to a suspicion of its presence.

I am, Sir, yours faithfully,

Prince's-street, W., April, 1886. T. ROBINSON.

"APOPLEXY WITH COMPLETE HEMIPLEGIA."

To the Editor of THE LANCET.

SIR,—With reference to his most interesting case of hemiplegia in a patient aged twenty-five, which appeared in THE LANCET of March 20th, p. 568, Dr. Fraser asks, "Is it sanguineous or serous effusion or hysteria?" I should say neither, but probably embolism. It would be interesting to know if the anæmic (?) murmur still exists.—Yours faithfully,

Pill, Somerset, April 2nd, 1886. A. H. BOYS.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Murphy, Sunderland; Surg.-Major Staples, Gibraltar; Dr. Armstrong, Newcastle-on-Tyne; Dr. Allchin, London; Mr. Boys, Pill; *Prof.* Burdon Sanderson, Oxford; Mr. Southam, Manchester; Mr. Mayo Robson, Leeds; Dr. Underhill, Tipton; Mr. W. C. Steele, Baling; Dr. Steel, Manchester; Mr. Morrant Baker, London; Dr. Johnston, Sheffield; Mr. Piesse, London; Dr. Hutchinson, Scarborough; Messrs. Boussod, Valadon, and Co., London; Mr. Boys, Pill; Mr. R. Harrison, Liverpool; Mr. G. W. Knott, Travenna; Mr. Gem, London; Mr. Heygate, Bath; Mr. Kinglake, Taunton; Mr. Branthwaite, Willesden; Mr. F. Benham, London; Dr. Diplock, Gunnersbury; Mr. T. W. J. Allen, Grimsby; Dr. Perkins, Hobart; Dr. Illingworth, Clayton; Mr. T. A. Kennedy, London; Mr. Bride, Melbourne; Messrs. Woollams and Co., London; Mrs. E. B. Mawr, Bucharest; Earl Sheffield; Mr. Fry, Swindon; Dr. Chunder Roy, Beerbhoom; Mr. E. Jamieson, Edinburgh; Dr. Spooner, Clapton; Mrs. Pratt, London; Messrs. Read and Co., Bristol; Dr. Chattergre, Kushinghur; Messrs. Hall and English, Birmingham; Mrs. Pratt, Bournemouth; Messrs. Midgley and Sons, Manchester; Dr. Mackay, Eske; Mr. Nicholson; Dr. D. Squire, London; Mr. Parsons, London; Mr. Kammerer; Mr. Bell, Dover; Mr. Browne, London; Mr. Phillips, Narberth; Dr. Brody, Detroit, Canada; Dr. Bowles; Mr. Newton, Sutton; Messrs. Condy and Mitchell, London; Surg.-Major Kenner; Mr. Collins; Mr. Leasy, London; Mr. Sacker, London; Mr. Paradise, Leigh; *Prof.* Rummo, Naples; Mr. Fryer, Gloucester; Madame Barker, Dieppe; Mr. Vate, Hendon; Mr. Marshall; Messrs. Cox Bros., Willeton; Mr. Harle, Bournemouth; Dr. McAdam, Edinburgh; Mr. Dixon, Pewsey; Mr. R. Freeman, London; Dr. Charteris, Buxby; Messrs. Clare and Hunt, Scarboro'; Dr. Thomas, Glasgow; Mr. Thomas, Swansea; Mr. Baker, Hereford; Mr. Hutchinson, Newmarket; Mr. Hope; Mr. Avering, Paddington; Mr. Montgomery, Partick; Messrs. Richardson and Co., Leicester; Messrs. Jevons and Co., Liverpool; Mr. Hulmer, Birmingham; Mr. Evans, Oswestry; Mr. Lange, Holloway; Fairplay; Matron, Denbigh Infirmary; H. W.; G. S. D.; Voyage, Kennington; D. N.; A. C., Devonport; Medicus, Highbury; Festina.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Stock, Weston super-Mare; Mr. Baboo-Shasht; Mr. Roberts; Mr. Eaton, St. Asaph; Mr. Crasswell, Highbury; Mr. Webb, Bury; Mrs. Turrell, Hertford; Mr. Bidsel, London; Mr. White, Bayswater; Messrs. Lee and Martin, Birmingham; Dr. Adams, West Malling; Messrs. Woolley and Co.; Mr. Armstrong, South Shields; Messrs. Thompson and Son, London; Mr. Bennett, Mayfair; Mr. Jones, Denbigh; Messrs. Hewlett and Co., London; Mr. De la Rue, Dieppe; Messrs. Muller and Co., Glasgow; Mr. Poole, Donaghadee; Mr. Fuge, Taunton; Dr. Waller, Peterborough; Mr. Cockell, West Hartlepool; Mr. Elliott, Chichester; Mr. Fowler, Pontymister; Mr. Foote, Rotherham; Mr. Hollings, Wakefield; Mr. Daly, Bristol; Mr. Evans, Cardiff; Messrs. Carless and Co., Devizes; Mr. Christmas, Eastbourne; Mr. Appleton, South Norwood; Mr. Willan, Leicester; Mr. Collins, Trowbridge; Dr. Brook, Hull; Mr. Hodgson, St. Helens; Mr. Logan, Glasgow; Mr. Wallace, Barnsley; Mr. Pratt, Clapton; Dr. Vintras, London; Mrs. James, St. John's Wood; Mrs. Piggot, Preston; L.R.C.P. & S., West Felton; A. H.; North; A. W. W., Fairfield; R. L.; Medicus, Fulham; A. F., Peckham; Physician, Bromyard; Surgeon, York; Matron, Bedford Infirmary; Medicus, Ellan; Medicus, Brighton; Treasurer, Rotherham Hospital; A., Fenchurch-street; The Secretary, London Temperance Hospital; Alpha, London; C. D., Little Ford; Matron, Bridgwater Infirmary; X. Y. Z.

Port Elizabeth Telegraph, Cumberland Pacquet, Rutland Post, Hexham Courant, Surrey Comet, West London Observer, Scotsman, &c., have been received.

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